# Paperclay in Recent South African Ceramics: Continuity and Change in Studio Works

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Dissertation submitted in partial fulfilment of the requirements for the Degree of Master of Arts in Fine Art in the Faculty of Humanities, Development and Social Sciences
University of KwaZulu-Natal: Pietermaritzburg, January 2012.

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## Declaration

Submitted in partial fulfillment of the requirements for the degree of Master of Arts in Fine Arts, University of KwaZulu-Natal, Pietermaritzburg, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Master of Arts in Fine Arts in the School of Literary Studies, Media and Creative Arts, University of KwaZulu-Natal, Pietermaritzburg, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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January 2012

## Abstract

This dissertation comprises the documentation and theoretical component of a practice-led Master of Arts in Fine Art. The illustrated text focuses in four chapters on a critical explication of contemporary South African ceramists namely, Juliet Armstrong, Betsy Nield, Liza Firer and Leanne Frisinger. The dissertation includes significant discoveries about the creative use of paperclay in contemporary South African ceramics and provides documentary record of the candidate's materials and processes. A conclusion briefly compares productions referred to in the text.

## Keywords

Porcelain, paper, clay, paperclay, ceramics, cellulose fibre, Betsy Nield, Juliet Armstrong, Lisa Firer, Leanne Frisinger, South African studio ceramics, postmodernism, printing, print-making, paper-making, photo lithography, creative practice, practice-led research, documentation.

*To Mom, Dad, and Travis*

*And to the memory of Tess and Jane*

## Acknowledgements

I would like to thank my supervisor, Professor Ian Calder, without whose enthusiasm this dissertation might have remained unfinished.

Thank you to the CVA staff that have taught and supported me throughout my time as a student.

Thank you to Professor Juliet Armstrong for introducing me to the material, paperclay.

Betsy Nield and Lisa firer, thank you for contributing your specialist knowledge to this dissertation so that others may benefit from your expertise.

I would like to thank the following people and their respective institutions for providing photographs and allowing me access to their ceramics collections: Monica Ross of the Rusten Vrede Durbanville Clay Museum, Jenny Stretton of the Durban Art Gallery, Hannelie du Plessie of the Pretoria Art Museum and Ceramics South Africa, for images from the Corobrik Collection. Lastly, for their dedication to contemporary South African ceramics a special thanks to Rika Stockenstrom and the staff at the William Humphreys Art Gallery, Kimberley.

To dearest Kim Bagley and Jessica Smith, thank you for the never ending encouragement and friendship.

To Travis. Thank you for providing the financial and emotional support to complete my studies.

Finally, I would like to thank my parents: Keith and Adele Spence, who encouraged me to study Visual Arts, for their unflinching love and support.

## Preface

Such is the practice-based nature of this dissertation, the first person will be used, where appropriate, by the candidate. Personal interviews with contributing artists are referenced as follows: (Frisinger and name of artist, date). The paperclay and paper-making workshop I attended in London, hosted by Carol Farrow, is referenced as (workshop with Farrow, 2010).

Depending on the author's preference, a clay body that is combined with cellulose fibre (paper pulp) has been called ‘paper clay’ (Gault, 2005), (Hamer, 2005), (Lightwood, 2005), ‘paper-composite clay’ (Kim, 2006) or ‘paperclay’ (Hay, 2007), (Holmes, 2000), (Marais, 2004), (Nield, 2004). Throughout this dissertation I have elected to use the one word format: paperclay, as I feel that it is a term which appropriately encompasses the material's nature- the merging of paper and clay. ‘Paper clay’, as two separate words, and ‘paper-composite clay’ are used in my text only when directly referencing authors who have titled the material as such.

Apart from the section titled ‘Process’ located in the third chapter of this dissertation, the format of this text follows the Style Guide for postgraduate text (Calder, 2008). The ‘Process’ section comprises two subsections: A. Production of porcelain paperclay and, B. Photo lithography printing onto paperclay surface. The photographic images and the accompany text are listed numerically. All other listed illustrations follow the Style Guide for postgraduate texts (Calder, 2008: 7).

Illustrations have been placed within the text as close as possible to where they bear particular significance to the text. Extended captions accompany many of the illustrations to highlight specific content where relevant.

A glossary of technical terms is included at following the comclusion.

This dissertation has two appendices: Appendix 1 contains my own adaption of Hilda Ditchburn's porcelain recipe, Appendix 2 lists the questions asked of each contributing ceramists regarding their use of paperclay.

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## Introduction

This dissertation is about recent paperclay ceramics in South Africa and the change and continuity this material is having on contemporary studio works. My aim is to stimulate new vigor and understanding into the processes of paperclay ceramics. My research concerns the development, design and making of paperclay ceramics, and the conceptual idea behind it. I will draw together the diverse approaches of making paperclay studio works. Hence, it is about the process of discovery.

I will present some fifty four illustrations of objects that reflect the energy, skill and innovation of artists working with paperclay. Many such artists are exploring new technologies using familiar ceramic materials. This dissertation deals with paperclay objects, vessels, abstract sculptures and installations that reflect on contemporary practice within ceramics. Most of the work illustrated has been produced within the last decade.

This dissertation is arranged in four chapters, each having its own short introduction. The opening chapter is dedicated to the discussion of practice led research methodologies and my role as a 'practitioner-researcher' (Gray and Malins, 2004: 23). It considers simulating a ceramic studio to a scientific laboratory; testing and documenting experimentation and processes. The chapter also contains a review of literature that looks at the broad range of influences that has encouraged ceramists to work with the material paperclay to create their studio works.

Chapter Two reflects on the history of fibre as a clay additive, the key material in paper-making and how the history of both practices has resulted in contemporary material paperclay. This leads on to the discussion of paperclay as a postmodern material. Lastly, this chapter addresses the idea of the paperclay vessel/object; with all its vitality and complex allusions from functionality and studio ceramic traditions, to being viewed as a postmodern form, embracing the apparent lack of utility.

Chapter Three examines the properties of paperclay; cohesion, dry crack resistance, dry strength, firing, health and safety. The techniques, methods and processes of how I make

porcelain paperclay and create lithographic transfers onto a paperclay surface are also discussed. Accompanying this discussions are digital photographs demonstrating the processes.

The final chapter is a look at four South African ceramists of which I am one: Juliet Armstrong, Betsy Nield and Liza Firer, who work with paperclay. With regard to porcelain paperclay, translucency as an aesthetic expression is discussed. The technical process of each artist is investigated along with visual considerations, choice of material and the iconographical nature of their studio works. Juliet Armstrong is the only ceramists from this grouping that does not work almost exclusively with porcelain paperclay.

This dissertation concludes with the hypothesis that paperclay is a synthetic material that has altered recent studio practice and while many ceramists working with paperclay acknowledge a ceramic tradition, all create work that is fresh, vibrate and modern hence showing a change and continuity in studio works.

# Chapter One

This chapter describes the background of this dissertation, its aims and outlines my role as a practice-led researcher. The practice-based methodology that I have employed in this dissertation acknowledges the relationship between my practical experimentation with the material paperclay and my authority as a researcher. The chapter also gives a literary overview of ceramic materials, methods, processes and contemporary ceramic practice within paperclay.

## Background

This research had developed from my own creative practice. The background information and accompanying images of my early paperclay (see glossary) studio work illustrate the beginning of my creative exploration with the material. Hence explaining why I have elected to research paperclay from a practitioner's perspective.

I was first introduced to paperclay by Professor Juliet Armstrong in 2008 whilst I was completing my Bachelor of Arts (Honours in Visual Art) degree with the Centre for Visual Art at the University of KwaZulu. It was my desire to make a set of tea cups and it was suggested by Armstrong that I should experiment with the material paperclay to achieve a new sculptural form that was delicate and paper-like. Armstrong and I combined studio prepared porcelain (see glossary), (Appendix 1) deflocculated with Dispex® (see glossary): an effective commercially produced polyacrylate dispersant (www.basf.com) with approximately 30% volume of cellulose fibre (see glossary), (personal notes, 2008). The resulting works (Figures 1 and 2) were paper thin and remarkably translucent.

**Figure 1**. Leanne Frisinger, *Tea Cups*, 2008. Porcelain paperclay and glaze, various sizes. Collection: Private. Photograph by Kim Bagley, 2008.

These works were made by cutting up sheets of porcelain paperclay and wrapping them around circular cardboard tubes. The rims where then ripped to give a paper-like effect. The works were displayed on light box to amplify their translucency.

**Figure 2**. Leanne Frisinger, *Detail of Tea Cup*, 2008. Porcelain paperclay and glaze, 4 x 3cm. Collection: Private. Photograph by Kim Bagley, 2008.

The cellulose fibre allows the porcelain to be worked to an extremely thin state while holding its shape in the kiln. The tear in the rim encouraged an organic flow to the tea cup highlight its delicate nature and paper-like look.

I continued to work with paperclay for the second semester of my Bachelor of Arts (Honours in Visual Art), electing to exploit the paper-like qualities of porcelain paperclay, instead of its translucency. The working strength of paperclay allowed me to cast literal paper thin sheets of clay. I was then able to fold, cut, tear and join the clay sheets together to create ‘origami’ (glossary) inspired forms. Wanting to create complex origami-like forms from paperclay, I found that the clay was not able to withstand the forceful manipulation required. I therefore

elected to fold the desired forms from high-cotton count paper and paint layers of thick paperclay slurry directly onto the paper forms.

I would describe the thick consistency of the paperclay used in this method as being midway between a sculptural body and a casting slip; it has a spreadable consistency allowing me to paint the paperclay slurry (see glossary) onto origami folded sheets of paper. The use of cellulose fibres is essential to the success of this technique in order to achieve sufficient cohesion. The combination of Displex® and paper pulp (see glossary) prevents excessive drying shrinkage. The thickness of the structures are built up layer by layer. An added benefit of the cellulose fibre is that wet paperclay slurry can be added on top of a dry layer without dry cracking (Figure 3). The paperclay coated origami structures were all fired to 1200 °C. The internal paper burnt away leaving behind a porcelain 'outer shell' of the original paper form (Figure 4).

**Figure 3.** Leanne Frisinger, *Origami Box-Bird*, 2008. Unfired porcelain paperclay, approx 5 x 5cm. Collection: Private. Photograph by Kim Bagley, 2008.

**Figure 4.** Leanne Frisinger. *Origami Box-Bird*, 2008. Porcelain paperclay with glaze, approx: 5 x 5cm. Collection: Private. Photograph by Kim Bagley, 2008.

Hence, the interest in the study of paperclay as a creative sculptural medium are based on my personal and professional grounds as a practicing ceramist. My early experiments with paperclay throughout my Bachelor of Arts (Honours in Visual Art) studies saw the start of my documentation of technical processes with the medium. To investigate the ideas, methods and experiences of local South African ceramists who are using similar materials, I elected to focus my research on the South African ceramists Juliet Armstrong, Betsy Nield, Lisa Firer and my own work. I had seen paperclay ceramic pieces by Nield and Firer at the William Humphries Art Gallery in Kimberley in 2009. I was introduced to paperclay by Juliet Armstrong and consequently feel it is important to include her work with paperclay in this dissertation. Visual illustrations of various paperclay studio works are used as examples of contemporary ceramic practice in South Africa.

Nield and Firer, like myself, work with thin sheets of porcelain paperclay. From a personal artistic stance I share a material connection with their work; the tactile nature of paper and clay is evident and the translucency of thin porcelain is embraced. Armstrong, Nield and Firer have many works in South Africa museum collections and galleries but there is very little information about their methods of production. Articles about Nield's paperclay ceramics has been published in National Ceramics, a magazine published by Ceramics South Africa. Nield and Firer were, at the time of this dissertation, working with porcelain paperclay and willing to discuss their paperclay ceramics with me. By comparing and contrasting my own works and knowledge with contemporary South African ceramists such as Juliet Armstrong, Betsy Nield and Lisa Firer, I have extended my critical and theoretical understanding of paperclay as a

postmodern ceramic medium.

## Practice-led research

As a ‘practitioner-researcher’ (Gray and Malins, 2004: 23) I aim to intertwine the theory and practice of paperclay usage in South Africa. The term ‘practitioner-researcher’ is defined by Robson (2003) as ‘someone who holds down a job in some particular area and at the same time carries out...inquiry which is of relevance to the job’ (Gray and Malins, 2004: 23). According to Gray and Malins, the advantages of being a practitioner-researcher combines the technical and material knowledge which I have at my disposal, ‘ ‘insider’ knowledge, experience and status usually lends your research credibility and trustworthiness in the eyes of your peers, this is, you are not an ‘external’ researcher’ (Gray and Malins, 2004: 23). Accordingly, my experience as a practitioner of ceramics amplifies my research ‘credibility and trustworthiness’ as opposed to an ‘external’ researcher who has never had hands-on working experience with ceramic materials. This is expressed cogently by Gray and Malins as follows:

> One of the essential characteristics of practitioner-research is that it is one’s own practice that is reflected upon...to look at one’s own creative practice means taking on both a creative and reflective role, in a sense creating a new research model which may use other models but will inevitably have its own distinct identity. (Gray and Malins, 2004:23)

As this dissertation seeks to develop explanations from ideas and experiences of South African ceramist artists working with the medium of paperclay, it is important to recognise that the arts have their own unique criteria for evaluating works as opposed to the social and behavioural sciences. Both the making process and aesthetics is a central feature of representation. Patricia Leavy (2009) considers it fundamental that researchers pay attention to the artistic craft they are adapting and learn the rules and traditions they are borrowing from. One cannot simply assume that they can experiment in ceramics (or any art) without any research or prior knowledge of the discipline itself (Leavy, 2009: 17).

As a practicing ceramic artist I have the tools, or as Gray and Malins put it, the ‘insider’ knowledge to merge my own interest and experiences with paperclay to create new knowledge based on personal resonance and understanding. I feel that paperclay pushes the boundaries of

ceramic material practices because it is a highly synthetic compound; and it is this hybridity that challenges the modernist boundaries of studio pottery, established by Bernard Leach, in which clay was a fundamentally natural substance. The creative processes used when working with paperclay are vital to explaining why ceramists are using it as a means of creative expression. There is a need to document the process and methods associated with the making of paperclay as a medium of creative expression: techniques and processes used when making determine form, meaning and effect (Rose, 2001:17).

**Methodologies**

A set of methodological tools relating to qualitative research including data collection, analysis, interpretation and representation have been implemented in my practice-led research. Leavy states that qualitative research can be considered as *craft*; 'qualitative researchers do not simply gather and write; they *compose, orchestrate,* and *weave*' (Leavy, 2009: 10). Accordingly as a researcher I am the instrument in qualitative research as in artistic practice; 'both practices are holistic and dynamic, involving reflection, description, problem formulation and solving, and the ability to identify and explain intuition and creatively in the research process' (Leavy, 2009:10). Consequently, qualitative researchers can be referred to as 'artist-scientist' (Leavy, 2009: 10). This methodology comprises new theoretical and epistemological groundings that are expanding the qualitative paradigm (Leavy, 2009: 3).

Within this specific category of arts-based research practice is *A/r/tographical work* (Leavy, 2009: 3). A/r/t is a metaphor for *artist-researcher-teacher* and merges 'knowing, doing and making' (Leavy, 2009: 3). It is an alternative to traditional research methods that may fail to comprehend issues and interests of artists therefore representing them ineffectively (Leavy, 2009: 4). Leavy argues that perspectives on how to attain authentic and trustworthy results are grounded in researcher's ontological and epistemological assumptions and there is no set model of evolution with respect to knowledge derived from qualitative methods (Leavy, 2009: 16).

**Research questions**

From my early experimental work, the subject of how far I would be able to push the boundaries of porcelain paperclay arose. I also wanted to know why paperclay, principally porcelain paperclay, behaves so differently from conventional clay; and, question the different ways ceramists work with this material? This gave me the idea to investigate the inner working and formative possibilities of paperclay, so I contacted South African ceramists Juliet Armstrong, Lisa Firer and Betsy Nield to question them on their experiences and asked each the same set of questions (Appendix 2).These ranged from:

(a) Material investigation:

- What type of clay body is used and why?
- How the paperclay mix is prepared?
- Why the ceramist has decided to work with paperclay?

(b) Conceptual investigation:

- How does working with a medium like paperclay stylistically influence your work?
- Iconographical reference of their paperclay studio work.

Contemporary South African ceramists are combining non-ceramic materials, such as paper pulp (cellulose fibre) with raw clay, in particular, porcelain. I intend to investigate whether the ceramists viewed paperclay as 'new' material of sorts. Does this represented in effect is a reaction against Bernard Leach's 'truth to material' (Cruise, 1991: 10), (Rawson, 1984: 15) and (Jones, 2007: 52) debate or has it simply been built on from existing ceramic knowledge?

**Aims and objectives**

To date there is a significant lack of knowledge and documentation of South African ceramists working with paperclay. Despite this lack of formal research, paperclay ceramics is a significantly growing component of public ceramic collections. I regard the benefits of paperclay as such that it is easily accessible to ceramic artists of all levels and abilities. It is inexpensive and easy to produce requiring little technical equipment.

This dissertation aims to reinforce the potential creative knowledge of paperclay by identifying useful practical information and techniques. This in turn will highlight the importance of combining ceramic technical knowledge with artistic methods. By means of questionnaires, empirical field work and practice-led research I want to identify and document the current trends of paperclay in my local context; also to situate these aims within a broader international context of creative production.

The research is a studio-based inquiry that attempts to explore the relationship between materiality and aesthetic expression of paperclay. The different creative methods used by the contributing ceramists will be compared and contrasted against 'ordinary' clay.

Leavy (2009) writes how arts-based researchers have created 'new ways of thinking about traditional research practices' (Leavy, 2009: 2). Researchers like me, who work as art practitioners 'seek to sculpt, engage, holistic, passionate research practices that bridge and not divide both artist-self and researcher-self' (Leavy, 2009: 2). Leavy suggests that an artistic method, such as Visual Art can serve as an entire methodology. I consider that arts-based practices are particularly useful for this dissertation as I seek to describe, explore and discover the creative medium porcelain of paperclay.

The practice-led nature of this research requires that I acknowledge that such methodologies are *emergent*, that being, the research strategy will grow and unfold thanks to the practitioner's interaction with the research question and context, while the research remains grounded (Gray and Malins, 2004: 72). The outcome of this research will be based my own personal experience and those of participating ceramists and therefore will only be generalised in principle. It is my wish that this dissertation will open the door for further practice-led research regarding paperclay ceramics in South Africa.

**Naturalistic inquiry**

Gray and Malins propose that naturalistic forms of inquiry are particular research methodologies that recognise research that happens in real situations such as ceramic studios (Gray and Malins, 2004: 200). I see ceramic art as being based on materials and processes. The

ceramic studio is my primary location for material and process experimentation, thus generating primary data for my practical research. Naturalistic inquiry acknowledges the importance of a natural setting or context where the researcher is the primary generator of data (Gray and Malins, 2004: 200); the 'natural setting' for this research is located in ceramic studios. 'Theoretical explanations, practical applications, and comparisons to the work of others, will emerge naturally from the experimental work in the studio' (McNiff, 1998: 146). The importance of 'likening the studio environment to a laboratory' (McNiff, 1998: 146), suggests that an art-based methodology encourages a combination of empirical work with the practical, art-making experience.

**Tacit knowledge: Ceramic knowledge and tradition**

My own experience with paperclay required a certain amount of practical knowledge and craft-based experience of ceramic materials and studio processes. The combination of intuitive ceramic knowledge (tacit knowledge) with experimentation resulted in the emergence of a workably paperclay. Jeoug-Ah Kim (2006) referencing Polanyi (1986) writes that:

> Tacit knowledge includes all experienced knowledge... tacit knowledge is linked to the abilities that individuals' possess based on elements of knowledge that were acquired through practical experience. These craft skills, routines and workmanship stem from tacit knowledge, particularly in the field of ceramic art/craft/design. (Kim, 2006: 18)

Tacit knowledge is understood to be a key characteristic of naturalistic inquiry, stating that it is implicit in the design process and must be acknowledged as a legitimate element of research design (Bunnell,1998, Methodology section 3.2.2).

As confirmed by Rosette Gault, the innovation and use of paperclay has descended from several entrenched bodies of 'knowledge and tradition' (Gault, 2005: 10). In order to locate paperclay within contemporary post-postmodern ceramic practice, a general overview of twentieth century ceramic tradition must be discussed. Art historical analysis of Bernard Leach's Anglo-Orientalism and Bauhaus philosophies regarding clay as a natural substance, of earth's origin itself and hence absolutely authentic in the services of age-old traditions of hand craft, is used to establish the foundations of international and South African ceramic tradition

(Cruise, 1991: 10). Reflections of modernity and its cause and effect on postmodern ceramic art within South Africa were scrutinised by Wilma Cruise (1991).

In the text *Crafting Qualitative Research* a characterisation for postmodern theory is explained as being deliberately unruly and refusing to comply with a single set of artistic rules or principles. 'Postmodernists have initiated a hybrid tradition that is committed to the practice of plurality, undermining the Metanarratives of Modernity, and the fusion of multiple fields, genres, and disciplines' (Prusad, 2005: 220). Postmodern ceramics, specifically paperclay ceramics, have developed from such an amalgamation; studio ceramic practice and paper-making methods.

**Interviews/Questionnaires**

In gathering information I was dependent on the co-operation and interest of ceramic artists who were willing to spend time explaining their working methods and creative ideas. To achieve dependable and reliable results I asked contributing ceramists the same set of questions covering different aspects of creative processes. The intent of the field research was to gain insight into how and why each ceramist makes paperclay ceramic art? Hence I formulated my questionnaire (Appendix 2) around the themes of materials, making processes, procedures, sources of inspiration and basis of practice.

## Literature Review

Literary review has an important place in arts-based research. 'Existing scholarship can be used to link 'micro' and 'macro' contexts' (Leavy, 2009: 20). As this research involves the explicit use of autobiographical data, review of literature becomes a key source for adding multiple voices, providing context and creating conclusions. 'In some cases the sources [are] both the process and the product of arts-based research.' (Leavy, 2009: 20) Conventional research practices classically start with a hypothesis; practice-based research can branch from a literature review and other sources, say a work of art as is this case for this dissertation. The literature review that follows in this section outlines some key texts that situate the premises of my research. I have divided each issue accordingly: Truth to Materials?, Postmodern and post-

postmodern ceramics, Paperclay, the quiet revolution and Technical literature.

**Truth to materials?**

Philip Rawson (1984) views clay as the soul of the earth; life giving; 'body of the earth, the mother of all' (Rawson, 1984: 23). This view of clay being seen as earthly and natural is popularized by Bernard Leach's *A Potter's Book* (1940). The 'Leach tradition' (Jones, 2007: 52) fashioned the image of the rural potter-craftsman, stirring a studio revival of Modernism. Leach created an idea leading to an ideal that encouraged a generation of potters to be as one with their work in a state of harmony with process and material (Jones, 2007: 52). This moral and ethical attitude towards clay, truth to materials, dominated Western ceramics from late the 1920s until, in many places such as South Africa, until the 1980s (Cruise, 1991: 10).

This dissertation will assess the question of why paperclay is being used so readily by contemporary South African ceramic artists, whether the ceramists in my study feel that the incorporation of cellulose with clay adds new expressive properties to their ceramic work and does this method differ from 'traditional' studio work? How is paperclay changing time-honoured ideas and late-modernist methods of working with clay? Ceramic theorist and artist Anne Lightwood (2000) explains that the current popularity of unconventional ceramic materials such as paperclay is a result of a new drive amongst contemporary ceramists to continually explore novel methods and techniques (Lightwood, 2000:14). Bernard Leach's romantic image of the rural, male, uneducated potter-craftsman producing unimaginative domestic wares in large quantities to be sold for local consumers has long since passed (Lightwood, 2000: 14). Lightwood argues that this image has now been replaced by a Visual Art college graduate, likely to be well versed in several academic and artistic disciplines and who has readiness to cross boundaries and embrace new processes and methods (Lightwood, 2000: 14).

The popularity and influence of Leach's cross-fertilised Japanese craft tradition with English ceramics an 'Anglo-Oriental' (Cruise, 1991:10) genre is mainly due to the publication of *A Potter's Book* in 1940. Edmund de Waal views the consequences of this publication as 'colossal' for Western ceramics as it acted as both a manual and polemic, suggesting the West

should look to the East for technical and aesthetic information (de Waal, 2003: 93). 'Leach and his apprentices dug and prepared local clay and built kilns, so beginning a new tradition in which studio potters completed all the processes involved in making vessels by hand' (Bosworth, 2006: 12). Leach encouraged all ceramic work be 'Towards a Standard' (de Waal, 2003: 93), he divided contemporary critics by voiding all figurative ceramics, most European decorative traditions and all the French pioneers. 'Not only are many other sorts of past ceramic achievements dismissed...but the future is closed' (de Waal, 2003: 93). As the result of what Cruise considers as a 'closed future', South African ceramics entered into a realm of stylistic stagnation (Cruise, 1991: 8). Cruise identifies Anglo-Orientalism through potters who express a preference for a simple life, working with natural materials to produce utilitarian pots.

**Postmodern and post-postmodern ceramics**

The development of ceramics from the 1900s to the eve of the twenty first century is located in the book *20th Century Ceramics* (2003). The internationally noted author and potter Edmund de Waal wrote this key text which examines the complexity of modernist ceramic trends throughout the twentieth century and the increasing combination of ceramics with other art disciplines such as printmaking and mixed media; 'The later part of the 20th century saw artists and makers question and reassess their use of materials; it was a time when the categorisation of fine art, sculpture and craft was being broken down' (Bosworth, 2006: 9). The concept of ceramics as a craft as opposed to 'high art' was challenged.

Working within a South African context examining twentieth century ceramic theory is local ceramist and theorist Wilma Cruise. Cruise's book *Contemporary Ceramics in South Africa* (1991) is still the most recent book about contemporary South African ceramics. Cruise claims that the Leach tradition of studio ceramics and the Anglo Oriental style dominated South African ceramics until the 1980's. From 1985 a retort to the oriental inspired genre is noted by Cruise.

Postmodernism gave rise to a new approach to ceramics. Cruise identifies postmodern ceramics as being 'eclectic and exuberant' (1991: 18). *Contemporary Ceramics in Southern Africa* (1991) is exceedingly outdated. The text is focused on the then current work of a variety of noteworthy

Southern Africans. Among those mentioned is Juliet Armstrong. Under the section *Sculpture* Armstrong's paperclay ceramic usage is briefly mentioned (Cruise, 1991: 98 and 188).

Detailing the liberation of postmodern ceramic style and social philosophies, of the later part of the twentieth century is the text *Postmodern Ceramics* by Mark Del Vecchio (2001). The introductory essay written by Garth Clark titled *Meaning and Memory: The Roots of Postmodern Ceramics, 1960-1980* provides an understanding of the reasons why ceramists moved away from the Anglo-Oriental genre 'truth to materials' and embraced work that was 'hot, messy and confrontational' (Del Vecchio, 2001:12), essentially postmodernist.

Looking at contemporary postmodern ceramics are the publications *Breaking the Mould; new approaches to ceramics* (Hanaor, 2007), *The POT, the VESSEL, the OBJECT* (Cooper, 2007) and *Contemporary Ceramics* (Cooper, 2009). In *Breaking the Mould* (2007) the essay *The Essential Vessel* written by Natasha Daintry discusses the concept of form and formlessness in the vessel. The same publication also contains the essay by Rob Barnard titled *The Idea of the New*, looks at the history and current practices within ceramics. Cooper in his text, *The POT, the VESSEL, the OBJECT* (2007) addresses the change and diversity of British studio ceramics. Also by Cooper, *Contemporary Ceramics* (2009) acts as comprehensive global review documenting recent ceramic studio works ranging from the functional to installations. Cooper proclaims the gap that traditionally exists between the realms of 'fine art' and 'craft' has narrowed, resulting in a shift in opinion of what ceramics can be and can mean (Cooper, 2009: 224).

**Paperclay, the quiet revolution**

Rhodes' second publication of the book *Clay and Glazes for the Potter* (1973) saw 'new' technical methods such as combining raw clay with organic and synthetic fibrous materials. Whilst such information was seen at the time to be revolutionary, Rhodes mentions that adding fibres such as straw, cactile fuzz and other organic matter with clay has been used by humans for thousands of years as a method to reinforce unfired clay (Rhodes, 1973: 57). The Bible story Exodus, Chapter V, tells of the Egyptian Pharaoh's spiteful order depriving the Israelites of straw for their adobe brick-making (Rhodes, 1973: 57). The volume also includes the

incorporation of synthetic material such as fibreglass with a raw clay that was absent from his previous edition of the text. Clark notes that Rhodes' inclusion of new technical information reflected a changing interest in techniques adopted by ceramists (Del Vecchio, 2001: 12).

Further historical references of cellulose fibre additives to a clay body is discussed in the texts by Rosette Gault, *Paper Clay* (2005), Anne Lightwood, *Working with Paper Clay and Other Additives* (2000) and Susanne Peterson (1998), *Working with Clay* and (2000), *The Craft and Art of Clay*; The authors' mention of the addition of fibre as clay fillers dates back thousands of years across a multitude of cultures.

One of the first technical articles concerning paperclay was written by Carol Farrow in April 1987 and published in the *Artist Newsletter*, United Kingdom. In the same year the French journal *Le Revue de la Cermique et du Verre* published an article titled *Papier Porcelain invention de Jean-Pierre Beranger.* In 1992, Rosette Gault wrote the article *Amazing Paperclay* which was published in *Ceramics Monthly* an American ceramic magazine. Gault holds a patent for her recipe for paperclay in the United States of America: US patent 5,726,111 *Paperclay and Methods of Process*, 10 March 1998 (http://www.patentstorm.us). Gault is the author of technical manuals for ceramists working with paperclay; *Paper Clay* (first edition 1998, second edition 2005). Gault has substantially contributed to the establishment of a formal knowledge base for ceramists working with paperclay that supports the expansion of the field of art.

Peterson notes that ceramic artists adding papier-mâché like strips or paper pulp in varying extents to a clay body is popular method to form very thin large slabs, from which sculptures can constructed (Peterson, 1998: 26). Gault acknowledges that it is thanks to worldwide contributions by contemporary artists that paperclay is emerging as a recognised ceramic art practice. 'The technical and aesthetic possibilities of paperclay provide ceramists with a most useful tool for creating their artistic visions in a way not possible that long ago' (Gault, 2005: 112). Gault feels that paperclay is a tolerant material that allocates more time for artists to create and connect directly with their ceramic works (Gault, 2005: 100).

In 2007 ceramists Graham Hay presented the paper *The Paperclay Revolution* at the National Council on Education for the Ceramic Arts conference in Louisville, Kentucky, USA on March 15 (Hay, 2007: 104). *The Paperclay Revolution* was reproduced the same year in *National Council on Education for the Ceramic Arts Journal*, USA, vol: 28, pp 104-105. Hay states that a so-called 'quiet revolution' (Hay, 2007: 104) of paperclay has been mounting for over twenty years. Hay recognises there are aesthetic and application style differences between countries, but what he considers fundamental is a consistent and steady increase in paperclay use, spread across all ceramic techniques and clay bodies (Hay, 2007: 104).

According to an article published by National Ceramics Quarterly in 2000 'paperclay has been used by overseas potters for many years but has only 'caught-on' here is South Africa fairly recently' (Holmes, 2000: 5). Locating a set time when paperclay was first use in South Africa is impossible. What is important is that there is an increased use of paperclay by contemporary South African ceramists.

It is my belief that ceramic magazines and technical publications available online have all played a substantial role in promoting the paperclay usage in South Africa. 'With the advanced and fast communication facilities, it becomes possible to examine easily and share the products and characteristic aesthetic tastes of other ceramic cultures' (Ozgundugdu, 2008: 89). The development of technology has allowed for easy exchange of ceramic knowledge, providing artists a space to question and express their ideas.

**Contemporary technical literature**

The technical manual *The Ceramic process/a manual and source of inspiration for ceramic art and design* (Reijnders, 2005) serves as my main technical reference throughout this dissertation, and states that fibre is added to a clay body to improve the following properties: working strength, cohesion, dry crack resistance and dry strength (Reijnders, 2005: 38).

The addition of fibre additives is recommended throughout Reijnders manual for medium-large

and extra-large sculpture pieces (2005: 43); sculpture body for small to medium pieces (2005: 43); porcelain sculpture body (2005: 45); title body (2005: 45); and casting clay body recipes (2005: 47). The amount of paper fibres varies according to individual recipes. Hence all clays are potential candidates for conversion to paperclay (Gault, 2005:17), (Hay, 2007:104) and (Reijnders, 2005:38).

Another technical reference is Frank and Janet Hamer's *The Potter's Dictionary of Materials and Techniques* (1986 and 2005). This comprehensive work provides simple definitions and concise information. Technical points are clearly explained. The fifth edition of this text (2005) includes a section detailing paperclay. This is not present in the second edition (1986), therefore supporting my argument that the current use of paperclay by ceramics has substantially grown in popularity.

In the case of my own studio works, and those made by fellow ceramists Betsy Nield and Lisa Firer, porcelain paperclay is the preferred medium. Explaining the distinctive attributes associated with porcelain, whiteness, purity, translucency and fragility, is the manuscript *Contemporary Porcelain* (1995) by Peter Lane. Lane comments on the increasing number of ceramists experimenting with porcelain bodies mixed with non-ceramic materials such as paper or textiles (Lane, 1995: 23). The addition of fibres gives the porcelain 'remarkable green strength in both leather hard and dry stages and it is possible to produce literally paper-thin sheets with it' (Lane, 1995: 24). Collectively Nield, Firer and I all agree with Lane's findings. By combining a porcelain body with paper pulp, ceramists are able to produce forms that are not possible with 'ordinary' clay (Leanne Frisinger and Betsy Nield, 2010).

From an academic research platform, the properties of paperclay as a sustainable and valuable resource to ceramic technology and creative development has conducted in the doctoral thesis completed by Jeoung-Ah Kim titled, *Paper-Composite Porcelain: Characterisation of Material Properties and Workability from a Ceramic Art and Design Perspective* (2006). Kim's research has shed new light on the material properties of porcelain paperclay. Working with a combination of artistic and laboratory experiments, Kim has proved that in comparison with a regular porcelain body, paper-composite porcelain has a higher green strength, lower shrinkage,

lower deformation degree and wider firing range (Kim, 2006: 37).

In the text *Contemporary Ceramics* Peterson writes that recent innovations in sculptural ceramics have been the result of combining clay bodies with complex non-ceramic materials such as metal and fibre before firing. These ‘new’ methods are, according to Peterson, ‘the most exciting arena for ceramics today’ (Peterson, 2000: 14). I agree with Peterson that paperclay is an adaptable and innovative medium for ceramists who wish to expand the technical and stylistic boundaries of their craft. Of the majority of published articles that have been examined for this dissertation, few refer directly to paperclay ceramic art in South Africa. As the medium paperclay can be easily adapted to be used in even the most basic of ceramic studios, I feel that further information regarding materials, techniques and expressions associated with paperclay would be beneficial to ceramic education in South Africa. As the material grows in popularity amongst ceramists it has started to become accessioned into museum collections and galleries, both at a municipal and national level. I feel that it is important that the information pertaining to the material and methods used by artists is correctly documented.

## Chapter Two

Chapter One outlined my early practical experience with paperclay, arguing that cellulose fibre is an extraordinary multipurpose additive to clay (Gault, 2005: 26). This chapter gives an historical overview of fibre in paper-making practice and as a clay additive. Paperclay has developed as a result of combining paper-making and tacit ceramic knowledge. I believe that the use of paperclay by contemporary ceramists has altered the tradition of studio works; the aim is to outline the field and context which this dissertation relates to. The dynamics of the paperclay vessel is the closing point discussed in this chapter. The reason for this discussion is that the vessel, even when not being made for a domestic function, remains a fashionable form made by contemporary ceramists, including those working with paperclay.

### Paperclay History; Mud, Earth and Adobe

In simplest terms, clay is comprised from the decomposition of igneous rock (Hamer, 1986:60). The transformative power of clay when exposed to heat is the likely reason why humans began to work with the material. Frank and Janet Hamer (1986) define clay as ‘a heavy, damp, plastic mineral that ‘sets’ upon drying and can be changed by heat into a hard, waterproof material’ (1986: 59). In its plastic state, clay can be easily fashioned but it also has the tendency to slump, distort or give way. Prolonged exposure to air will dry moisture out of the clay giving it stability but removing its ability to be manipulated. It will shrink during drying and if this is done unevenly cracks/faults can form. It is also most fragile in this green unfired state. Once air dried it is exposed to intense amounts of heat resulting is more shrinkage, and if the clay was not handled correctly during making, the thermal reaction can cause warpage, cracks, collapse and other such undesirable visual changes. There is no definitive manual on how to work with clay; ‘there is never one reason why things happen as they happen and that there is never one way to go about the process’ (Reijnders, 2005: 17). I feel that any attempt to apply strict rules of ceramic practice diminishes the richness and creative potential of the medium.

Hamer identifies that the ideal clay mineral is kaolinite. It is considered to be of ‘chemical purity’ (1986: 59). Hence kaolin (see glossary) is added to paper to create, among other

qualities, whiteness. If whiteness and translucency is aimed for with clay, as in porcelain, kaolin has to be the main ingredient (Reijnders, 2005: 35). Porcelain is distinguished by 'delicacy, translucency, fineness, whiteness, density and purity' (Lane, 1995: 7). Porcelain bodies commonly comprise of three base ingredients: kaolin (china clay), feldspar and silica (quartz). Kaolin has a very low plasticity and therefore requires the addition of bentonite (see glossary).

Contemporary ceramics emerged from the foundations laid down by generations of potters that have already explored practical and aesthetic aspects of clay. Paperclay is occasionally seen as an exciting new development among ceramic practitioners, yet knowledge of combining organic fibre with a clay body is by no means a new idea. Clay has been used in combination with natural fibres to make unfired Adobe bricks as a building material since the beginning of the Neolithic period, 10 000 years ago (Peterson, 2000: 10). An early documented written record of humans mixing organic fibrous material with clay, to improve its workability and physical properties, can be found in the Old Testament, Exodus 5 verse 7; as punishment for Moses and Aaron asking the Pharaoh to let the Israelite slaves free, the King of Egypt tells the Israelite foremen to 'stop giving the people straw for making bricks' (Holy Bible, 1985: 65), hence highlighting its cultural significance of this time.

Adobe (see glossary) style structures are most commonly found in landscapes where the sun is dominant throughout the year, therefore converting mud and fibres into sturdy clay materials (Gray and Macrae, 1976: 7). The bricks are made by combining local clay with sand and/or fibre such as straw (Kim, 2006: 16), (Lightwood, 2000: 22) and (Peterson, 1998: 136). Adobe bricks act as the 'natural flesh of wall…turn bricks in the drying sun, and lay them in walls' (Gray and Macrae, 1976: 7). Combining clay with fibrous material makes it stronger especially if left in the green state. This is in stark contrast to conventional clay that is typically most fragile in the green, unfired state (Hamer, 1986: 108) and (Reijnders, 2005: 133).

Potters have long used the concept of clay additives to achieve the types of bodies that they desire. The idea of adding inert materials to a clay body to change its workability and propensity for thermal-shock destruction is as age old. For instance rural, potters in

Bophuthatswana use dried cow dung as additive in their clay. The organic cellulose fibre found in the dung serves two purposes, 'it opens out the clay body, making it less liable to thermal shock; and it also makes use of a common substance to bulk out the more valuable clay so that less of that material is needed' (Lightwood, 2000: 22). Another example of early cellulose fillers is apparent in Figure 5 *Boli Figure or Power Figure* made in Bamana, Mali. The unfired bovine-like form is made from clay, mud, fibre and wood. The addition of fibre with clay and mud provides the figure with excellent dry strength. The fibres also give the sculpture texture. British ceramist Grayson Perry considers such forms to possess a 'raw potency that seems to hark back to the very beginnings of art' (Perry, 2011: 109). Interestingly, Peterson states that the clay chemistry behind the age old method of combining natural mud-earth mixed with fibrous additives serves well for contemporary ceramists who are attracted to exotic methods of construction and display (1998: 136).

**Figure 5.** Unknown. *Boli Figure or Power Figure*, date unknown. Clay, mud, fibre and wood with single cowrie shell pendant. Collection: British Museum. Photograph by Leanne Frisinger, 2011.

**Paper-making**

In terms of material, true paper is made from macerated fibres thinly intertwined to produce sheets (Sloman, 2009: 7). Quoting Frank Hamer, Lightwood describes paper as being composed of vegetable cellulose fibres which are 'strong and resilient, expanding and contracting reversibly with the intake of evaporation of water' (Lightwood, 2000: 42). The production process of making paper is highly sophisticated, involving a high-speed filtration process that weaves an ultra-thin fibrous web (Roberts, 1996: 1). Modern day paper-making is made up of several technologically advanced processes, all of which had to happen prior to its

use as a clay additive (Gault, 2005: 8).

**Definition of paper**

Paper has originated out of the desire for humans to write, illustrate and record information (Sloman, 2009: 6). One industrial view of paper from the 1960's defines paper-making as the following:

> A sheet or continuous web of material formed by the deposition of vegetable, mineral, animal or synthetic fibres or their mixtures with or without the addition of other substances, from suspension in a liquid, vapor or gas in such a way that the fibres are intermeshed together. Paper may be coated, impregnated, printed or otherwise converted, during or after its manufacture, without necessarily losing its identity as paper. (Bolam, 1965: 15)

The history of paper-making reveals that it is as much an art form as a manufacturing process (Sloman, 2009: 10). The identity of paper is made up of a network of fibres. The basic and most fundamental material of paper is thus cellulose fibre.

**Cellulose fibre**

Cellulose, a basic structure of plants, is an essential component of paper which is isolated to become paper-makers' pulp (Richardson, 1990: 9). Paper-makers tend to favour longer fibres, such as cotton, as they give greater strength (Lightwood, 2000: 42). When viewed under a microscope, a sheet of paper is seen as a web with air spaces arranged between the fibres (Gault, 2005: 27), (Lightwood, 2000: 43), (Richardson, 1990: 9) and (Sloman, 2009: 8).

**Kaolin: paper filler**

Fillers (see glossary) are fine, white powders made from minerals or are chemically engineered. Fillers are used to create the smooth, even and high gloss surface of paper and improve the absorption of printing ink. Fillers improve the dimensional stability of paper, flatness and softness, making it easier to handle (Bolam, 1965: 136). 'China clay (kaolin) is the filler most widely used' (Bolam, 1965: 137). Paper-makers have long known that a small proportion of clay acts as a good 'filler' as it fills in and smoothes out the air pockets in the

fibrous texture of paper (Gault, 2005: 8) and (Richardson, 1990: 15). Kaolin is added to improve certain optical properties of paper, in particular opacity and brightness, or simply as a cheap replacement for costly fibre. Kaolin is specifically used as a filler because of its small particle size, making it ideal to create smooth receptive surfaces that take ink so well (Bolam, 1965: 137).

The ability for cellulose fibre and clay to work together as additives lies in the molecular structure of cellulose and the practical size of clay (Gault, 2005: 26-27) and (Lightwood, 2000: 42-44). The addition of kaolin into the suspension processes of paper-making is important to the properties of the final sheet of paper and also to the smooth running of the paper-making process itself. 'Kaolin or china clay can be added to the vat as a powder, up to 10% can be stirred in. The effect is to fill the spaces in the paper and when ironed can help to give a shiny surface which would be pleasant to write on' (Richardson, 1990: 15). Chemically aggregated to increase its coating (see glossary) bulk, kaolin clay gives paper excellent base sheet coverage resulting in crisp white paper (Sloman, 2009: 197).

**Properties of paper**

The intertwined cellulose fibres are fundamental to the nature of paper, providing it with properties such as 'a good mechanical strength combined with lightness and flexibility' (Bolam, 1965: 17). Scientific research has confirmed that single fibres are extraordinarily strong and even when dry, a wide range of elasticity, allowing it to be bent and stretched within certain limits (Bolam, 1965: 17).

In November 2010, I attended a paper-making workshop in the United Kingdom with British ceramist and paper artist Carol Farrow. I experienced firsthand the working strength of cellulose fibres. Farrow shred sheets of high cotton paper, such as fabriano paper® (see glossary), mainly for its long and thus strong cellulose fibres, and immersed it in a vat of water. The mixture was then beat (see glossary) to form a pulp. With a deckle and mould (see glossary), the suspended paper pulp is scooped up onto the mess covered mould. Once a sheet of paper is formed on the mould, it is transferred to a to damp, high cotton fabric, known as a

felt. This process is termed as couching (see glossary), as the felt acts to support the wet paper and absorb the water. To create flat sheets of paper, the damp paper is pressed between two boards, to get rid of the water. However, for the workshop, I was not interested in making flat sheets of paper for writing or drawing on, but rather blind embossing (see glossary) the paper to create an art object. Once the paper had been couched, the wet sheet is pressed to the outside wall of Farrow's East London Studio (Figure 6).

**Figure 6**. Leanne Frisinger. *Blind Embossing Paper Sheet on Wall,* 2010. Handmade paper, 20 x 45cm. Collections: Private. Photograph by Leanne Frisinger, 2010.

The strength of the cellulose fibres, hold the wet sheet of paper to the brick wall. The wet pulp retains the embossed face brick pattern as a relief. When removed from the wall a raised design is seen.

Working with the environment around her, Farrow (Figure 7) blind embosses designs and reliefs into her paper. Farrow's paper art transcends the association of paper as medium on which one can write or illustrate on, becoming an art work. The creative attention is tuned to the material and medium becomes the object.

**Figure 7.** Carol Farrow. *Untitled*, 2010. Handmade paper, acrylic paint and wax. Collection: Private. Photograph by Leanne Frisinger, 2010.

**Paperclay**

As previously stated, clay is a complex material. If there was a way of working with the same material but eliminating all of its negative/problematic qualities why would ceramists not make use of it? A material to facilitate such quandary is paperclay:

> Imagine a clay body that can be used to make large slabs with little or no warping or cracking; has incredible green strength; can be assembled at any stage; is compatible with your existing glazes and when fired, weighs up to 50% less than ordinary bodies. With such a clay, formerly 'impossible' construction and firing techniques are no longer taboo…so what is this miracle body made of? Clay and paper. (Gault, 1992:96)

Gault defines paperclay as a half solid, half fluid plastic modelling mix of clay, paper pulp and water (2005: 7). Gartside in the article *Mix what with clay?* (1993) states:

> When clay slip and paper pulp are mixed together the platelets of clay are easily syphoned into the fibres-tubes. The resulting complex network of fibre and clay slip gives the mixture important and unusual working characteristics of benefit to potters and sculptors. (Gartside, 1993:32)

The strength of paper depends on the length and strength of the individual fibres. The cellulose tubes act as a web intertwining the small clay particles. This is the reason why paperclay has increased green strength and resilience to stress during making and firing (Gartside, 1993: 32).

The long flexible tubes absorb water readily, enabling paper clay to be wet and rewet many times without drying cracks forming.

Quoting Gault, 'contemporary paperclay is descended from several well-established bodies of knowledge and tradition' (2005: 10). Through my practical studio experimentations working with paperclay, I judge paperclay as an exceptional ceramic medium that acts unlike ordinary raw clay. It is my understanding that paperclay had developed thanks to a key scientific understanding and industrial developments in both clay production and paper-making.

**Porcelain paperclay**

Paper-making and porcelain paperclay ceramics are involved in a hybrid practice: adding small amount of kaolin-to-paper in paper-making and paper-to-porcelain in ceramics. Both ceramists and paper-makers partake in this practice to improve creative and physical attributes of the material. I feel that there is a common material signature shared by paper and porcelain paperclay: thinness, translucently, flexibility, strength, whiteness, smooth surface and the ability absorb to printing ink.

## Contemporary Ceramics

The studio ceramic movement was founded on the Leach principles of 'truth to materials' (Cruise, 1991: 10); clay is unadulterated and free from impurities, dug from the earth and combined with other earth minerals to aid workability (Rawson, 1984: 23). Adding an industrially produced material like paper pulp with raw clay changes the clay from a natural, earth substance to a synthetic-like material that acts in exotic ways.

Studio ceramics revolves around the concept of 'beauty through utility' (Cruise, 1991: 10). Postmodern ceramics is founded on a questioning of this idea of beauty. Clay mixed with varieties of both organic and synthetic materials, offers ceramists alternative material practice and process that would not be possible with a standard clay body. Peterson in *Contemporary Ceramics* (2000) states that 'new ways of incorporating complex materials with raw clay before firing may be the most exciting area for ceramics today' (Peterson, 2000: 14). She

acknowledges that contemporary ceramists combine raw clay with a multitude of man-made or natural materials as a way of enhancing creative meaning (Peterson, 2000: 14).

The combination of non-clay materials, such as paper pulp, with a clay body changes the working properties of clay. By working with paperclay I feel that I am not creatively restricted by my elected medium. I consider paperclay to be an example of how contemporary ceramists have challenged previously established dogmas.

**Breaking the tradition of studio ceramics**

Whilst Bernard Leach was not solely responsible for the upsurge of studio ceramics in the early twentieth century, he is however seen as a catalyst both practically and theoretically. America in the mid 1950's, thanks mainly to ceramic artist Peter Voulkos, saw a vigorous new approach that challenged the connections of ceramics to function that emerged in America at this time (Cruise, 1991: 10). In South Africa this was not the case until the 1980's. Leach's conservative Anglo-Oriental aesthetic of utility through beauty held a dominant position in South Africa, as the connection with Britain through historical and familial links was particularly strong (Cruise, 1991: 10).

Cruise comments that it was extremely hard for the South African ceramist to move away from The 'Leach language' (Jones, 2009: 54) of 'truth, beauty and vitality' (Cruise, 1991:12). The romantic idea of natural, pure clay, dug from the earth, shaped into forms by means of 'honest labor' (Arnold and Schmahman, 2005: 142) thus to be the polar opposite of paperclay, which I consider to be a hybrid synthetic material, made by combining industrial waste materials such as paper pulp and cotton with clay.

I believe the disregard of clay as a pure, earth mineral is what makes paperclay so fascinating. I have the ability to take greater risks; experimenting with exotic materials to construct work in a different idiom to those of traditional studio works. For example clay can be literally paper thin and worked at any drying stage. According to Graham Hay, paperclay has been at the centre of an international clay revolution that has been building since the 1980s (Hay, 2007: 104). He believes that paperclay radically overcomes many of the typical problems that ceramists face

working with traditional clay, such as drying out, cracking and low dry strength. Despite its technical advantages, the spread of paperclay has taken place 'under the radar' (Hay, 2007: 104). Hay claims that this is due not to the resistance of well known, traditionally trained ceramist and educators, rather thanks to the fact that paperclay has been mostly embraced by more adaptive students and ceramic artists with lower profiles (Hay, 2007: 104).

There is a current popularity for innovative ceramic materials. This is the result of a new drive amongst contemporary ceramists to continually explore novel methods and techniques (Lightwood, 2000: 13). Whilst conducting research for this dissertation, the main motivation given by artists to work with paperclay was creative freedom and easy application of the medium (Frisinger and Armstrong, 2010), (Frisinger and Firer, 2010) and (Frisinger and Nield, 2010). According to published reports, this sentiment towards paperclay is shared by other ceramists. 'It [paperclay] frees the mind and so allows the imagination to take over…many potters feel that paperclay allows them to be more of an artist and less of a technician' (Lightwood, 2000: 13). Thanks to the increase of ceramic courses offered through universities globally, Visual Art students are encouraged to branch out and experiment with a variety of disciplines, materials and techniques:

> An Emerging artist has available a range of possibilities... Perhaps it is for this reason that many users of paperclay are young people, recently graduated and free from the 'mug and jug' ideologies. (Lightwood, 2000: 13-14)

As a university student I am encouraged by lectures to test out new materials and processes. My own university experimental work with paperclay was influenced by my professor, Juliet Armstrong.

In England, during the seventies and eighties, the tradition of studio ceramics was challenged by a group of dynamic students working in the ceramics department at Goldsmith's College (Lightwood, 2000: 72). One of those students is Carol Farrow.

**Carol Farrow**

Farrow first began working with paperclay during her diploma training at Goldsmiths in the United Kingdom. Farrow says that her development with paperclay was initially started thanks

to a kiln accident when a fellow student fired a gas kiln with a plastic torch inside. 'I just thought that the way in which the plastic had melted in the kiln was so beautiful that I decided to start experimenting with firing other non-clay objects in the kilns such as stones, books and plastic' (workshop with Carol Farrow, 2010). From her kiln experiments, Farrow discovered that paper, especially glossy paper used in magazines, contained high proportions of china clay and when fired to high stoneware temperatures would leave 'a very fragile ceramic material' (Lightwood, 2000: 73). To prevent the books (Figure 8) or magazine stacks from being destroyed during the firing process, Farrow would bind the paper with stainless steel wire and enclose them in saggar (see glossary) or under the weight of kiln furniture (Lightwood, 2000: 72) and (workshop with Farrow, 2010). Farrow describes that, 'this transformation of 'books' was not only departing totally from utilitarian aspect of ceramics but pushing the limits of non-functional ceramics' (Farrow, 1987: 20). The incredibly fragile nature of the fired books appeals to Farrow as she find that it corresponded in her mind to the preoccupation with the transient qualities of much of today's written matter. The look and feel of a book is more important than its content (workshop with Farrow, 2010).

**Figure 8**. Carol Farrow. *To D.B… this story will never end*, late 1970's. Fired in saggar with sawdust to 1300 ° C oxidation, date unknown. Collection: Private. http://www.grahamhay.com.au/farrow1987.html [accessed 22/2/2011]

Critics suggest that Farrow's work relies heavily on elements of chance. Farrow adamantly denies any use of chance firing stating that her work is completely controlled by the firing techniques and the knowledge of how different papers react at various temperatures. 'It is not the element of chance but that of change which is integral to each piece' (Farrow, 1987: 21).

By firing a book in a kiln it alters its purpose to become an object. Farrow questions how often a book from our shelves re-read? Have they not transcended to become symbols and visual catalogues of past experiences? By applying elements of change brought on by intense heat of the kiln, the books are reincarnated as fragile objects, echoes of the printed word (Farrow, 1986: 20).

**Robert Rauschenberg and paperclay**

Throughout the sixties there was an experimental approach to papermaking and using paper in a sculptural manner. One such artist undertaking this was Robert Rauschenberg (Lightwood, 2000: 70). Rauschenberg travelled to Ahemedabad in India to work at an ashram for a month. Fueled by the notion of breaking with tradition, he used a combination of two-dimensional printmaking with three-dimensional sculpture to create his artworks.

Travelling to India to be involved with paper-making and textile factories (Lightwood, 2000: 70), the workshops provided Rauschenberg with materials to experiment as he set about making the *Bones and Unions Series* (Figure 9). India has a long standing historic tradition of creating unfired sculptures out of papier-mâché mixed with clay; the combining of mashed rags, paper, grass, cow dung, mango leaves, sand, rice hull and bamboo with clay was done to create adobe bricks and ritual objects (Gault, 2005: 11). Rauschenberg experimented with what he called ‘rag mud’, a combination of paper pulp and adobe clay (Lightwood, 2000: 70).

**Figure 9.** Robert Rauschenberg. *Ally, from Bones and Union Series,* 1975. Kiln fired rag-mud, rope, dyed string and bamboo, dimensions unknown. Collection: Private. http://www.christie.com.cn/lotfinder/lot_details.aspx?intObjectID=5129226 [accessed 20/02/2011].

Working clay combined with paper pulp, fenugreek powder, ground tamarind seed, chalk powder, gum powder and copper sulphate with water, the rag-mud mixture was fired in a kiln. (http://cs.nga.gov.au).

**'New' materials**

Farrow and Rauschenberg are examples of postmodern artists experimenting with new materials and technologies thereby altering the idea of how clay made work should look. A range of diversified raw materials and production methods allows contemporary concepts in the ceramic arts to develop in addition to time-honorued preferences. The development of technology, diversified raw materials, easy supply of such materials and the knowledge of different methods provides a space for ceramic artists to question and express their ideas in a bold new way. I perceive paperclay as a good example of how contemporary ceramic practice has developed by means of material investigations and a changing attitude towards what constitutes the correct or 'ethical' (Rawson, 1984: 10) materiality of clay.

Ceramists such as Rawson view the industrialisation of ceramic materials as being 'out of touch' with 'natural' materials 'which have always been an important part of the 'life' of ceramics as an art' (Rawson, 1984, 10-11). He believes that modern materials are unable to imitate the achievements of past pottery traditions. He does, however, acknowledge that potters have always filled the role of a scientific chemist, changing the basic nature of clay so that material is easier to work with; 'purified his materials as best he could, and recombined them in experimental fashion.' (1984, 11) Regardless, Rawson states that the familiarity of clay as earth should not be lost. Thus ceramics who transcend the earthly nature of clay and mud to manufacture a clay that can represent 'whiteness and glassy purity' (1984, 13) is to be 'deplorable on a moral ground' (1984, 13). Despite his own moral stance of clay, Rawson notes that 'we would of course, be completely wrong to reject all such work on artistic grounds' (1984, 13). His ideology is that clay must convey a direct sense of its natural material; 'even at the limits of finesse the sense of the material as symbol must never be submerged…clay remains clay' (1984, 14). Interesting, Rawson critically comments on the

opposite side of the ceramic material spectrum as well. Ceramists concerned with the return to, 'the essential nature of materials', inspired by Bernard Leach, run the risk of elevating their aestheticism and regarding themselves as elitist (Rawson, 1846, 14).

Technical research is often viewed as the nucleus for ceramic knowledge. This is elucidated in the opening statement by Reijnders, 'an understanding of the drastic changes in the material as they occur during the various stages of the ceramic process is critical to working with ceramics' (Reijnders, 2005: 17). Unlike other art forms such as painting or drawing, ceramic art work can never be controlled fully, there are too many variables, the firing; the composition of materials, to the equipment used. All of these have noticeable effects on the end product. Reijnders claims that being well versed in ceramic technical knowledge and openness to experimentation with the medium is paramount to facilitate synergy between ideas and the creative making process (Reijnders, 2005: 18). Thus emphasising that processes and material investigations are integral to clay based artwork.

Lurie Schneider Adams in the text *Methodologies of Art* (1996) writes that as a product, Art is 'formed from unformed material, or in some cases, re-formed from formed material' (Adams, 1996: 205). Consequently, this process of formation is part of the transitional character of art. Historically, art is made from natural earth materials (Adams, 1996: 205); 'these materials are transitional in their role as intermediaries between the artist's idea and the finished product' (Adams, 1996: 205). Adams asserts that artists select specific materials because the medium possess a meaning. Sidney Geist refers to this 'love of material' as a 'psychological, not a sculptural affair' (Adams, 1996: 205). As an artist, I am in control of my creative space and the activity that occurs within it. 'Since artists select their materials, it must be assumed that the material has a meaning for the artist' (Adams, 1996: 205). My selection of porcelain paperclay is a conscience choice as the material processes ephemeral and paper-like qualities that I like to emulate in my studio work.

According to Hay (2007), Lightwood (2000) and Gault (2005), paperclay is an international trend. Hay notes that, 'while there have been differences between countries, what is consistent is the steady increase in paperclay use, and its spread across all ceramic techniques and all

types of clays' (Hay, 2007: 104). As previously mentioned, paperclay is seen as an exciting 'new' development in the ceramic field (Gault, 2005: 122). Rob Barnard in his essay *The Idea of the New*, (Hanaor, 2007), states that we are fixated with the idea of the 'new':

> The idea of 'newness' as a marketing tool runs across cultures. We are told we can find happiness in new relationships, and new environments. Inherent in the idea of the 'new' is an escape from our present predicament to one that is more pleasurable and more secure. (Hanaor, 2007: 16)

So what about the idea of the 'new' in terms of paperclay ceramic art? How does one go about measuring its newness, as a creative material? Gault states that there has been 'much experimentation and growth in this new but 'old' medium…as word gets out about the versatility of paper clays, expect to see more wild juxtapositions and playful imaginative work' (Gault, 2005: 112). Peterson (1998: 1) recognises that 'new knowledge' and scientific investigation of ceramic materials have expanded our understanding of what constitutes ceramic products and how they should be made.

Since the Second World War, university art departments that included ceramics sprung up across the United States of America and United Kingdom (Hanaor, 2007: 17). 'Academe became a greenhouse for ceramic art, a place not only where it could be protected from the harsh judgments of culture but also where it could be nourished by the economic security and social status found in university teaching positions and funded studios that accompanied those positions' (Hanaor, 2007: 17). Clay practitioners are shifting away from making a living as a potter, to the much more lucrative and secure position of a university instructor (Hanaor, 2007: 17).

These new surroundings resulted in ceramists being placed within a university system, competing with colleagues such as painters and printmakers for recognition. The historical language of 'truth to materials' and 'beauty through utility' (Cruise, 1991: 10) is replaced by a new form of ceramic expression. Ceramists are focused on being as 'rebellious, heroic and outside the mainstream' (Hanaor, 2007: 18). The concept of rebellious, non-mainstream ceramic expression is evident in the work of Marilyn Levine.

De Waal categorized Levines' work (Figure 10) under the umbrella term 'Super-Object' (de Waal, 2003: 172). Levine creates ceramic pieces that reject clays' historic language. The Super-Object is an obsessively crafted rendering of detail and trompe l'oeil (see glossary) (de Waal, 2003: 172). Levine's work is essentially conceptual art, hyper-realistic in nature; Trompe l'oeil: French word meaning to literally fool the eye. Art works are made to look amazingly realistic, a type of optical illusion. The astoundingly realistic nature of Levines' work is achieved by mixing clay with fiberglass or nylon fibres (de Waal, 2003: 172).

**Figure 10.** Marilyn Levine. *Boots with Steel Toes*, 1971. Stoneware with nylon fibre and engobe, left 19.2 x 28.1 x 11.1cm right 20 x 23.3 x 11.6cm. Collection: Private. www.marilynlevine.com/artworkframeset.html .ceramics [accessed 19/05/2010].

Using a stoneware clay body, Levine adds 1.5% - 2% chopped nylon fibre. Working with interior armatures to support the heavy weight of the clay, she constructs her ceramic pieces (www.marilynlevine.com). The surface colour is achieved by kneading engobes into the clay prior to basic construction. The fibre mixed with the clay allows Levine to create work that challenged the viewer to question its material. Her work is seen as rebellious as she is turning everyday objects into relics. The fibre added clay to the does not adhere to any of Bernard Leach's, 'truth to materials' mantras. The addition of the man-made nylon fibre changes the working properties of clay, making it easier to handle and pose as a non-ceramic material such as leather, wood or steel.

## The Contemporary Vessel

Emmanuel Cooper, quoting French social theorist Jean Baudrillard states, that 'when an object is divested of its function, its destiny is to be collected' (Cooper, 2009: 58). Cooper defines a vessel as a container; interior volume with walls that can be seen as defining and shaping (Cooper, 2007: 54). By adding a base to a hollow shape one is essentially making a vessel. If it can remain empty, does it require a function to justify its existence? Throughout history there have been vessels which are constructed with more care and thought designed to be ornamental more than functional (Dormer, 1988: 8). There is no longer a need for potters to make everyday utensils. I therefore find it difficult to comprehend the outrage that is associated with the departure from the purist dominance of the Anglo-Oriental genre of studio pottery, where beauty exists in utility. The vessel need not be utilitarian to validate its form and beauty.

I consider the vessel as a gauge of ceramic history. 'Since the beginning clay has been used to make things beyond the needs of daily life…both daily life and fantasy/luxury have been served by pottery from the earliest time' (Dormer, 1988: 8). The vessel is a persistent motif made throughout history and across cultures. Daintry views the vessel as quiet and obedient, yet expressive in the way it reflects us back to ourselves (Hanaor, 2007:6).

The current age of mass-produced plastic and low cost industrial clay vessels has resulted in the idea that the contemporary vessel can deny function. Why then is there an ongoing deliberation between the 'useful' and the 'useless'? Or as Cooper states, 'between ceramics that are washed and those that are dusted' (Cooper, 2007: 41). Jennifer Kopping questions feels that there is a need to explore the vessel within a fine art context. Therefore challenging the way in which ceramic vessels are perceived within the broader sphere of the Visual Arts (Kopping, 2008: 1). Kopping notes the need to distinguish what is meant by a functional pot as opposed to a contemporary vessel. Wayne Higby offers a definition for what he terms the contemporary vessel:

> The contemporary vessel is an object that presents the formal essence of the pot exaggerated to reveal a personal and artistic vision uninhabited by pragmatic issues of function. (Cruise, 1991: 15)

Cooper investigates the complexity of the vessel in the essay *Pot Vessel Object*. He considers the debate between the relative values of *pot* against *vessel* and *object* as echoed in the struggles between the representational and the non-representational in painting (Cooper, 2007: 41). A glance at twentieth century ceramic history shows pots that comprise of beauty and are intended for use as being an 'ethical pot' (Cooper, 2007: 43). The folk-craft attitude of Bernard Leach and Michael Cardew promoted the making of utilitarian wears over and above the decorative objects of contemplation. The polarisation of the ethical, utilitarian pot with the contemporary vessel has neglected forms whose purpose is that of contemplation and decoration. The 'function' can be purely aesthetic.

Departing away from domestic wares does not mean an abandonment of the vessel. Studio ceramics define vessels as usually having a distant or faint, relationship to use (Cooper, 2007: 53). Cooper argues that work which has appropriated the form of a container may take on more metaphorical or symbolic qualities. 'In some ways they [vessels] occupy the ground between the pot and the object, asserting their independent and authority with expressive work that has freed itself from any explicit function' (Cooper, 2007: 53). Many contemporary ceramists in South Africa make vessels that are silent about their function.

With the freedom of postmodernism, ceramists working with the material paperclay are able to create work that references functionalism whilst, the deliberately thin walls and decorative surface treatments defy 'use'. Work such as Lisa Firer's delicately handbuilt paperclay bowl (Figure 11). Firer's bowl suggests functionality, but the fragility of the paper thin walls makes it unsuitable for domestic use. By challenging the idea of the function and vessel within its very format, Firer addresses what Cooper terms 'symbolic function' (Cooper, 2009: 59).

**Figure 11.** Lisa Firer. *Vessel*, 2010. Porcelain paperclay, dimensions unknown. Collection: Private. Photograph by Kim Bagley, 2010.

Reflecting on her work, Firer quotes Lao-tzu; 'we make vessels of clay but their true nature is the emptiness within' (www.lisafirer.co.za). Daintry sees a vessel to be defined by the negative space in and around it, as the skin of the ceramic itself negotiating between inside and outside (Hanaor, 2007: 3). This metaphor is further intensified by the transparent nature of Firers thin porcelain vessel (Figure 12).


**Figure 12.** Lisa Firer. *Bowl. 2009.* Porcelain paperclay, approx 10 x 19cm. Collection: Corobrik Ceramic Collection, housed at Pretoria Art Museum. Photograph courtesy of Ceramics Southern Africa, 2010.

Paper-thin cutout sheets of paperclay are layered on top of one another. The translucency of high fired porcelain combined with the thin walls of the paperclay permits the overlapping joins to be clearly seen from interior and exterior views.

Using porcelain paperclay, Firer is able to create three dimensional vessel forms from flat sheets of paperclay. Firer's vessel forms do not intentionally deny utility, rather partially

embrace it. Her vessel forms possess a wide range of expressions and purposes. The translucency of Firer's porcelain paperclay connects the inside with the outside of the vessels. Firer states:

> I think of these vessels as gathers of light and shadow, reflecting the potter's life… the ongoing creation of containers, searching for and creating outside reflections of interior spaces. Spaces that hold and contain life's moment-to-moment fleeting experiences. (www.lisafirer.co.za)

Cooper sees vessels as objects that are likely to have deep resonations with the past, combined with a sense of identification of the present (Cooper, 2009: 58). Like many contemporary artists, I have drawn ideas from other cultures, in particular Victorian English and oriental tea canisters. I see the tea canister as being deeply rooted in tradition therefore fundamentally linked with the past, whilst still being relevant today. Being well aware of my own cultural background as a white, female South African with British ancestry, I identify with Victorian tea canisters. I elect to interpret the tea canister in a totally contemporary way in order to respond to my own life experiences.

In my own work, I use the box as a starting point for endless subtle variations on the theme of the container. The materiality of paperclay allows me to literally fold paperclay sheets into box/vessel forms. I consider the folded base (Figure 13) of my vessels to be a three-dimensional gestural 'signature'.

**Figure 13.** Leanne Frisinger. *Vessel (detail: Folded base),* 2009. Porcelain paperclay with ceramic pigment, approx: 6 x 6 cm. Collection: Private. Photograph by Leanne Frisinger, 2010.

The relationship between form and surface design is an important consideration in my work.

Working with my own Anglo-South African background, I explore a cross-cultural theme such as tea canisters with visual images drawn from my family history. More information about my work is discussed in Chapter Four.

For Firer, form and decoration are intimately combined; taking full advantage of the translucency of paperclay to create cylindrical forms that when illuminated from within the surface reveals the decorative image (Figure 14).


**Figure 14.** Lisa Firer. *Love is the great work*, 2009. Porcelain paperclay, glaze on the inside, dimensions unknown. Collection: Private. Photograph courtsey of the artists, 2010.

The messages inscribed into Firer's vessels are encoded into the forms. Only when light fills the otherwise empty vessel can the phrase be deciphered. The concept of light as an aesthetic element is further examined in Chapter Four.

The dynamics of the vessel, in all its complexity and trajected historical references, remains a powerful genre in contemporary ceramic art. For many ceramists working with paperclay, the vessel as an object resonates with the past, whilst also combining a sense of identification with the present.

# Chapter Three

The previous chapter examined the history of papermaking, clay, paperclay and contemporary ceramics; in particular the vessel was discussed. This chapter looks at the unconventional working properties of paperclay. Artists who work with clay are profoundly involved with techniques, materials and forms. For the purpose of this dissertation I have included a two part a visual step-by-step guide illustrating, (A) how I make my porcelain paperclay and (B) print photo lithographic transfers onto the porcelain paperclay surface.

## Properties of Paperclay

To gain a better understanding of the technical aspects of paperclay one must have a good knowledge of clay bodies and their components, the ceramic science. 'Paper clay ceramics could not exist without an existing foundational knowledge of compatible clay and glaze chemistry. In this sense, paper clay is an offshoot of ceramic science' (Gault, 2005: 17). *The Ceramic Process* (Reijnders, 2005: 38) maintains that cellulose fibres are adding to a clay body to improve the following properties:

- Working strength
- Cohesion
- Drying crack resistance
- Dry strength

My attraction to work with paperclay is its ability to defy traditional rules of ceramic practice (for example Leach's insistence on the properties natural 'raw' clay), since my work deals with synthetic material. The style and form of my own ceramic work is not obtainable with non-paper added clay. Working with a notoriously difficult ceramic material such as porcelain, the addition of paper pulp gives the porcelain remarkable strength in both the wet and dry states, making it possible to produce literally paper-thin sheets of clay. These sheets can then be torn or cut with scissors and then assembled via means of folding and bending around various forms (Figure 15)


**Figure 15.** Leanne Frisinger. *Tea Canister (detail: Folded base)*, 2010. Porcelain paperclay, ceramic stain, oxide pencil, approx 10 x 8 x 15cm. Collection: Private. Photograph by Leanne Frisinger, 2011

As previously mentioned in Chapter Two, the folded base is a stylistic signature common to all of my recent paperclay vessels.

**Clay and Cellulose**

As detailed in Chapter Two, cellulose fibre present in paperclay increases the working strength. Hence, I am able to cast large, extremely thin, sheets of porcelain paperclay onto a plaster-of Paris bat, and after about twenty minutes to half an hour I am able to lift the sheets without any tearing (Figure 16).

**Figure 16.** Leanne Frisinger. *Removing wet paperclay sheet from plaster-of-Pairs bat*. 2011. Photograph by Mhairi Pattenden, 2011.

Increased working strength allow ceramists to work in unconventional ways, folding, cutting or tearing holes in the clay without having to worry about the structure collapsing. Thin walls of paperclay can be constructed and joined together. This does prove to be a double edged sword

in some cases; the increase in working strength at times encourages ceramists to create work that is too thin or delicate. There is a temptation to construct thin and outrageous shapes with paperclay. Such forms will not survive the firing process. A solution to this was put forth by Graham Hay; simply do not fire paperclay work. In the article *Why Burn Paperclay*, (2007) Hay states that whilst unfired conventional clay work is never a serious option because of its fragility when dry, the cellulose fibre in paperclay substantially strengthens dry paperclay forms, giving unfired paperclay forms a real potential for indoor decorative work.

**Cohesion**

When cellulose is added to a clay body, it permits wet paperclay to be added to dry (Lightwood, 2000: 42). 'The ability of being able to join dry-to-dry (with paperclay slip) plastic-to-dry and plastic-to-plastic, the versatility of paperclay as compared to conventional clay is obvious' (Holmes, 2000: 5). The strong and resilient cellulose fibres boast the ability to expand and contract with the intake and evaporation of water.

**Drying crack resistance**

It is virtually impossible for large cracks to develop as the clay dries. Should a crack emerge, one can simply layer more paperclay slurry on top, instantly mending it. Using this technique I successfully mend cracks on my studio works. With conventional clay, as moisture evaporates the clay particles pull together and shrinkage occurs. If a substantial amount of shrinkage occurs, tension will build up and cracks will form. With paperclay, shrinkage is substantially less, hence there is little to no warping and forming of cracks.

**Dry strength**

Ordinary clay bodies are extremely vulnerable during the drying phase. The opposite is true for paperclay, as it is strongest in the green state. Paperclay has remarkable green strength and extremely resilient. I am able to use sand paper on my dry paperclay work to remove any unwanted rough rims or surfaces. A piece with a high dry strength is able to withstand more stress during handling. However, this quality of extra strength is reduced after bisque firing.

### Firing paperclay

Conventional clay bodies require a work to be completely dry, water content of the piece being equal to that of the surrounding air before it can be fired in a kiln (Reijnders, 2005: 141). This is so cracking of clay caused by tension does not occur. This does not always apply when firing paperclay as I have been able to fire thin paperclay forms when they are still wet. The small hollow tubes of cellulose fibre in paperclay provide capillaries for moisture to escape from during the firing process. Nield fires her thin-walled paperclay work whist wet and experiences no tension cracks (Frisinger and Nield, 2010)

### Health and safety

As cellulose fibre is an organic material, when combined with a wet clay slip black mould spores will form, causing unpleasant smells. This can potentially be harmful if breathed into the lungs (Lightwood, 2000: 51). Working in KwaZulu-Natal with damp and humid conditions, I have found that my paperclay will start to decay within a few days. To overcome this problem, I add about a tablespoon (15ml) of domestic bleach into the mixture. Firer and Nield also use bleach to combat mould and the unpleasant smell (Frisinger and Firer, 2010) and (Frisinger and Nield, 2010). Carol Farrow surmounts the issue of mould by drying out her paperclay then simply reconstituting it with hot water, returning it to slurry (workshop with Farrow, 2010). I have found this to be the best method of storing paperclay for longer periods of time.

## Process

In the early stages of this research, questionnaires were sent out to contemporary South African ceramists who work with paperclay. A question regarding the making process of paperclay was included. For the purpose of this research I have documented the process of how I make porcelain paperclay. For confidentiality reasons recipes of the contributing ceramists have not been included in this paper.

There are numerous varieties of paper suitable to be added to clay bodies (Gault, 2005: 30). Originally I made porcelain paperclay using commercially supplied cellulose fiber (Figure 17)

that is used in building insulation.

**Figure 17.** *Cellulose fibre used in building insulation.* Photograph by Leanne Frisinger, 2011.

The pre-shredded, *fluffy* character of this cellulose fibre is convenient to use. However the fine particles can easily be breathed in during the making process. Interesting to observe is the fire retardant nature of industrial cellulose that is designed to prevent the material from burning far beyond the burning point of ordinary paper.

I first read about using toilet paper as a cellulose additive in *The Ceramic Process* (Reijnders, 2005). 'Good results have been gained using toilet paper: it is easy to process as it does not contain (much) glue' (Reijinders, 2005: 39). In comparison to the light weight, feathery, commercially supplied cellulose, toilet paper is a great deal easier to pulp and no fine particles can be breathed in whilst making the paperclay slurry.

As a material I find paper captivating. It can be folded, ripped, cut, glued together to form three dimensional shapes, not to mention the role it plays in our daily lives, from till slips, books, cards, letters and legal documents to art works that are painted, printed and drawn on them. My aim is to create ceramic work that demonstrated the different working qualities of paper; working with porcelain clay body not only for its high level of translucency, but the close relationship it shares with paper.

In order to emphasize the process and materiality in my ceramics, the following section is divided into two subsections: *A. Production of porcelain paperclay* and *B. Photo lithography printing onto paperclay surface.* Subsection A illustrates and annotates the production of paperclay. The recipe for my porcelain paperclay can be found in Appendix 1. The second subsection B illustrates and annotates image production and on my paperclay surface. This is a personal adaption of porcelain paperclay and photolithography ceramic transfer printing. The photographs for both subsections A and B were taken by Mhairi Pattendon in 2011.

## A. Production of porcelain paperclay

1. Mix up a thick slip from powered porcelain (recipe for my porcelain body: see Appendix 1). Add the dry clay materials into water. Using an electric mixer, mix until a thick cream-like consistency has been reached.

2. Separate the cardboard tube from the toilet roll and submerge the remaining tissue paper into a bucket of boiling hot water. The average weight of a toilet roll is 100g. I normally mix up 2 kgs of porcelain slip at a time, adding 5% dry weight paper fibre. It is therefore extremely convenient to use toilet paper as I use one roll at a time to make a batch of paperclay.

3. Using a wooden mixing spoon, blend the toilet paper into the water, until every fibre is saturated. Leave the pulp mixture to cool until it can safely be handled.

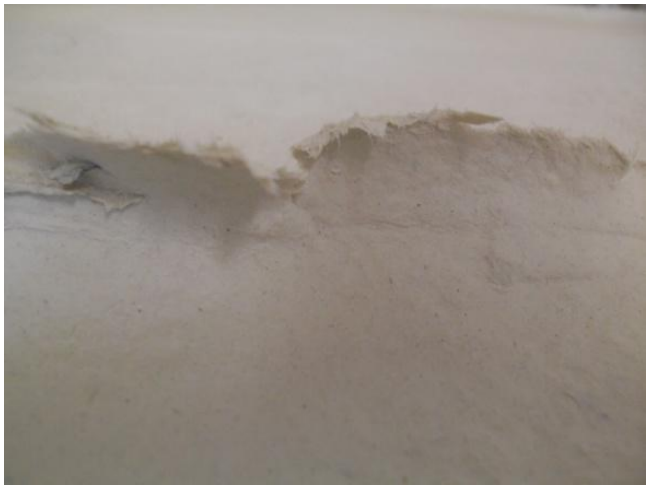
4. Using a regular mesh kitchen sieve, remove the excess water from the paper pulp. Squeeze any extra water from the pulp.

5. Slowly add small amounts of the pulp mixture to the ready prepared clay slip. Use an electric mixer to form a consistent paperclay slurry (more water can be added later should the mixture to thicken for construction purposes).

6. A food blender is not advised as the sharp, serrated blade will shred the long cellulose fibres; the longer the fibre, the stronger the working and dry strength of paperclay. The mixer is ready for use once the clay slurry will visually resembles the paper pulp texture. It should feel like thick ‘porridge’ with no large clumps of clay or pulp.

7. To prepare the material for construction. Pour the thick, paperclay slurry onto a plaster bat to remove water from the material. Working with your fingers or brush, spread the thick slurry onto the bat. Run pottery rib over the slurry to smooth and flatten material into a sheet.

8. To achieve a greater thickness, paint an additional layer of paperclay slip onto the drying sheet.



9. After half an hour the plastic sheet of paperclay can be lifted off the plaster bat in one smooth pull (start removing the sheet by raising the edge of the paperclay sheet from the bat).

10. In removing the sheet of paperclay from the plaster bat it should remove easily as the clay and cellulose have combined to plastic mass. But if the sheet tears it can be patched easily with wet paperclay slurry.

11. The paper pulp substantially increasing workability of the porcelain clay. As with either plastic or leatherhard, the clay sheet can now be cut to size and folded to create three dimensional forms.

**B. Photo lithography printing onto paperclay surface**

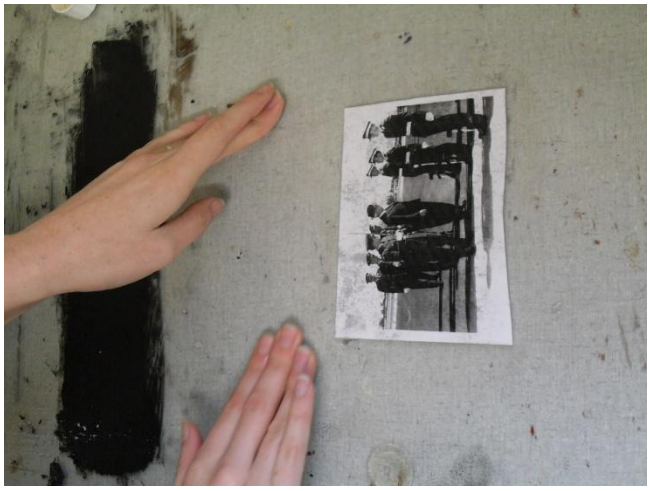
The technique that I use to print photographic images onto porcelain paperclay is based on a combination of similar methods seen in publications such as *Ceramics and Print* (Scott, 2002: 112 - 113) and *Surface Design for Ceramics* (Mills, 2008: 78 - 84). In 2010 I saw an online video tutorial posted on *Ceramic Arts Daily*, (www.ceramicartsdaily.org) explaining the process of working with photocopied images to create lithographic transfers. I have since adapted this method to print onto porcelain paperclay. The instructions for my method of lithographic printing process are as follows:

Materials

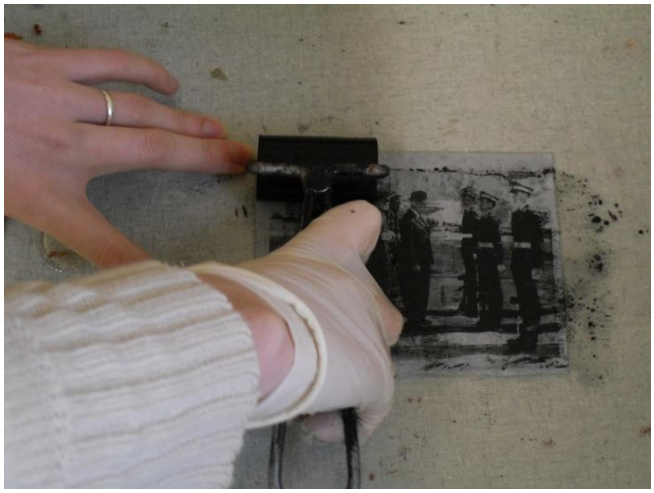
- Ceramic pigment/stain or oxides
- Flat pallet knife
- Gum Arabic (liquid)
- Latex gloves
- Linseed oil
- Photocopy of chosen image
- Rubber printing brayer
- Sheet of glaze to ink up brayer and image
- Sponge
- Two containers filled with clean water

1. Make ceramic ink by mixing linseed oil with ceramic stain or oxide in 3:2 part ratio. Mix very well with a flat pallet knife. The ink should be left over night in a sealed container for best results. The ink should be of the same consistency as acrylic paint. It is important to wear latex gloves when working with ceramic pigments as they often contain hazardous materials such as manganese oxide.

2. Fill a container with approximately four cups water. Add about a tablespoon of liquid Gum Arabic.



3. Drip some Gum Arabic on a sheet of glass. Place image face up on the gum. Using fingers rub the gum on top of the image. Wipe off excess gum from around the image.



4. Load the brayer with ink, coating it evenly by rolling it back and forth. Hold the photocopy paper image in place on the glass then, going from top to bottom, then left to right, coating the image with ink. Do not run the brayer up and down as the image will wrap itself around the brayer.

5. Once the image surface is evenly coated with ink, soak the image by squeezing a sponge of the gum-water into the image. Working with the sponge blot up the excess water from the image. Repeat inking and blotting process three times.

6. Carefully lift the image from the glass and place it face down onto the damp porcelain paperclay. Be sure to register the image correctly as you will distort the print if is moved around. Use a clean wet sponge to rub over the back of the paper to prevent air bubbles. Burnish the back of the paper with small circular movements.

7. Lift the paper very carefully from the paperclay to reveal a lithographic transfer of the image. I then fire the paperclay to cone 6 (1220°C).

# Chapter Four

This chapter looks at the concept of translucency as an aesthetic expression in paperclay. Also discussed is studio work made by four contemporary South African ceramists, Juliet Armstrong, Lisa Firer, Betsy Nield and a review of own paperclay work, concentrating on the materiality, conceptual application and visual qualities.

## Translucency as an Aesthetic Expression

One of the greatest aesthetic attractions of working with porcelain is its translucency. Peter Lane (1995) refers to the ideal porcelain body as being:

> [a] supremely white body which would be very plastic, easy to throw or handbuild, be able to support its own weight when wet, have minimal shrinkage, resist cracking or splitting at every stage from wet to dry, be translucent when relatively thick, be strong when fired, and mature around 1200°C. (Lane, 1995: 16)

Lane goes on to state that it is unlikely that all of the requirements can be met, yet it has been my experience that porcelain paperclay meets most of the desirable qualities. My porcelain paperclay is plastic enough for me to fold and bend around forms, is easy to handle, has tremendous green strength even when very wet, reduced shrinkage, crack resistant at every stage and exceptionally translucent when fired to maturing temperatures exceeding 1200°C. In the case of whiteness, the hyper translucency of porcelain paperclay conflict; ‘a material is either extremely white and opaque or extremely translucent and not white’ (Lane, 1995: 18). From a scientific view, if light is reflected back to the human eye, an object appears white, if most of the light passes through an object, less light is reflected back making it semi-translucent (Lane, 1995: 16).

For a porcelain body to have a good balance between being white and translucent, pure clay with a low percentage of metal ions (kaolin) is combined with high firing feldspar. The recipe for the translucent porcelain paperclay body (Appendix 1) that I have used for the past four years was developed by the late Hilda Ditchburn (1917-1986) and (Davies, 1989: 1). It is a popular porcelain recipe amongst students, past and present, and lecturers at the University of

KwaZulu-Natal.

The properties of whiteness and translucency are dependant on two essential properties: light absorbing and light scattering (Lane, 1995: 16). The handling of light permeability of porcelain paperclay work is an important aesthetic element. Light not only ensures our vision but can also hamper it. This contrast between light and shadow introduces new aesthetics dimensions in ceramic art. The shadow aesthetic created by the filtering of light through paper-thin transparent ceramic forms (Figure 18) creates interesting visual effects, existing independently beyond the material. The filtering light invites the viewer to enjoy a cryptic calmness.

**Figure 18.** Leanne Frisinger. *Detail of Ephemera*, 2009. Paper porcelain, 2 x 2m. Collection: Private. Photograph courtsey of Nivea Start! Exhibition, 2009.

Note the differences of thickness in the walls of each unit. The illusion created with the light permeability is brought to the limits by the fineness of the thin and fragile forms.

In my work *Ephemera* (Figure 18), the contrast between light passing through the semi-transparent box forms introduces the viewer to a new visual element. My aim was to create a work that would instill a sense of serenity and quietness. The porcelain forms borrow part of the natural light, absorbing and filtering, therefore creating the shadows from within the forms. One can see the delicate differences in the thickness of the walls. This is further amplified by the fact that this work appears notably thin and fragile but is actually strong and refined.

When viewing the works of Lisa Firer (Figures 19 and 20), the practice of enhancing the translucency in an aesthetic manner is axiomatic. By placing electric lights within her porcelain paperclay forms, the permeable light increases the works visual fragility. The cast shadows act as a narrative, making the semi-transparent porcelain paperclay works transcend the material's objective reality, into a fantasy world. The fired porcelain forms appear to be fragile and delicate while telling the story of a fluid and transparent cover that seems to be a shadow. In a way this creates interest, depended on lightness and darkness and the existence of shadows. The application of electric light introduces the audience to visual objects otherwise hidden behind the porcelain sheet. Only when filtered light is present can the visual totality be fully understood.

**Figure 19.** Lisa Firer in collaboration with Marlise Keith. *Untitled,* 2009. Porcelain paperclay and ceramic stain, dimensions unknown. Collection: Private. Photograph courtesy of Lisa Firer, 2010.

**Figure 20.** Lisa Firer in collaboration with Lindy Sales. *Tea Lights*, 2009. Porcelain paperclay and ceramic stain, dimensions unknown. Collection: Private. Photograph courtesy of Lisa Firer, 2010.

The arrangement of thin, cutout images back-to-back creates an effect of layering; illuminated from the inside a sense of ethereal shadow puppets is perceived.

## Four South African Ceramists

Including myself, a choice of three contemporary ceramists, Juliet Armstrong, Lisa Firer and Betsy Nield is critically discussed. For each artist I will consider visual and conceptual methods of expression together with their choice of clay and methods of construction.

### Juliet Armstrong

Juliet Armstrong is considered by Wilma Cruise to be one of the most noted female South African ceramists (Arnold and Schmahmann, 2005: 143). 'Armstrong is knowledgeable about clays and glazes and, through extensive research into ceramic material, has become the foremost sculptor in bone china in South Africa' (Arnold and Schmahmann, 2005: 145). Her work is not solely driven by material investigation. Her terracotta paperclay shack-like dwellings along with her quite translucent bone china forms with their congregated, metallic paperclay holders are instilled with subtle socio-political commentary.

### Early ceramic career

A graduate from the University of Natal in Pietermaritzburg, Juliet Armstrong was mentored by Hilda Ditchburn (Frisinger and Armstrong, 2010). In 1973-74 Armstrong attended Leicester University in the United Kingdom where she completed a diploma in Industrial Ceramics.

Returning to South Africa, Armstrong became the first ceramic student to be granted a Master of Arts Degree in Fine Art in 1977. Armstrong herself became a lecturer at the university and was appointed Associate Professor of Ceramics in 1998 (Arnold and Schmahmann, 2005: 143).

**Paperclay**

Armstrong first started working with paperclay in the early 1980s after seeing images of Carol Farrow's postgraduate exhibition of kiln fired books at Goldsmiths in 1982 (Frisinger and Armstrong, 2010). After viewing Farrow's work, Armstrong was drawn to the notion of adding paper pulp to a clay body. Corresponding closely with printmaker Sue Rosenberg, who at the time was experimenting with adding small amounts of clay to her handmade paper, Armstrong in turn, added small amounts of paper to her clay mix (Frisinger and Armstrong, 2010). In the 1980s Armstrong and Rosenberg held a joint exhibition showcasing their new works that combined paper with clay (Frisinger and Armstrong, 2010). In 1986, Armstrong was asked to teach this new method of working with clay at a workshop at the UNISA Fine Arts Department on the Durban campus (Frisinger and Armstrong, 2010). Armstrong made her first paperclay mix by combining recycled egg boxes with left over studio slip. This mixture was deflocculated, so was thick and not excessively viscous. The thick paperclay slurry was then cast onto plaster-of-Paris bats. To gain grooved surface texture she poured the paperclay onto a plaster bat was cast from corrugated metal (Frisinger and Armstrong, 2010).

Armstrong's early paperclay works are inspired by informal dwellings often seen across South Africa (Figure 21). Her abstract-box shaped shelters act as sociopolitical statements expressing what Cruise states as 'clear iconographical intention in spite of the abstract form…there is a meaning to the works that goes beyond the purely aesthetic' (Cruise, 1991: 98) Armstrong comments that these works where not meant to appeal visually, rather act as statements, commenting on the living conditions of urban shack dwellers in South Africa.

**Figure 21**. Juliet Armstrong, date unknown. *Shelter*. Earthenware, paper and wood, 24 x 13.5 x 18cm. Collection: Private. (Source: Cruise, 1991: 98).

The corrugated texture used on *Shelter* (Figure 21) transcended to become the bases for her bone china forms (Figures 22 – 26). Cruise questions the juxtaposition of the fine translucent 'light-gathering' conical shapes resting above and within layers of what looks to be deconstructed informal building materials, cardboard, paper and corrugated metal. Are these works a response to anger or destruction? Cruise notes that Armstrong prefers not to elaborate on the conceptual meaning electing that it remain an 'open-ended question' (Cruise, 1991: 98). When questioning why Armstrong used paperclay to make the pedestal-like holders for her delicate bone china forms she states that 'I like combining the bone china with the paperclay. There is a sort of roughness with the paperclay that contrasts with the smoothness of the bone china' (Frisinger and Armstrong, 2010). Armstrong enjoys the grungy, almost crude paper-pulp texture that she is able to achieve. The textured paperclay is the complete opposite to the fragile, delicate and pure white bone china (Frisinger and Armstrong, 2010).

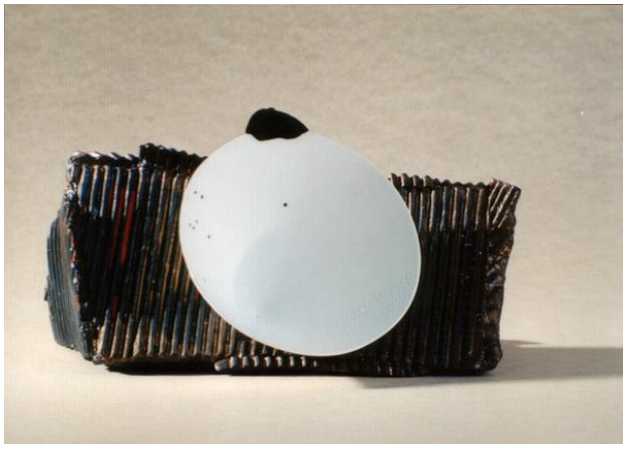


**Figure 22.** Juliet Armstrong. *Black Spot*, 1989. Bone china, paperclay and glaze. Collection: Private. http://www.julietarmstrong.co.za/_gallery.asp [accessed 15/05/2011].

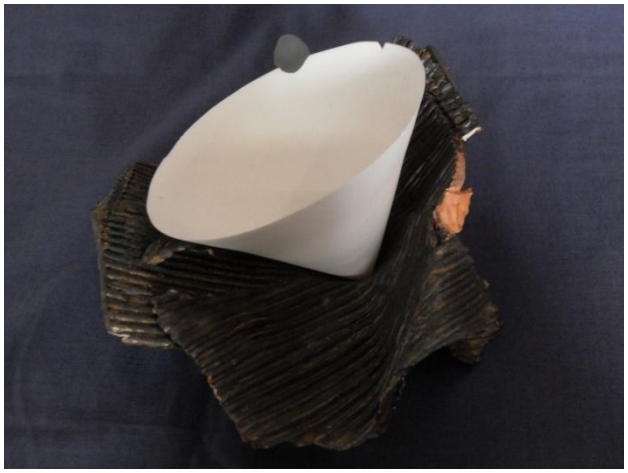


**Figure 23.** Juliet Armstrong, *Untitled*. 1989. Bone china, paperclay and glaze. Collection: Durban Art Gallery. Photograph by Leanne Frisinger, 2011.

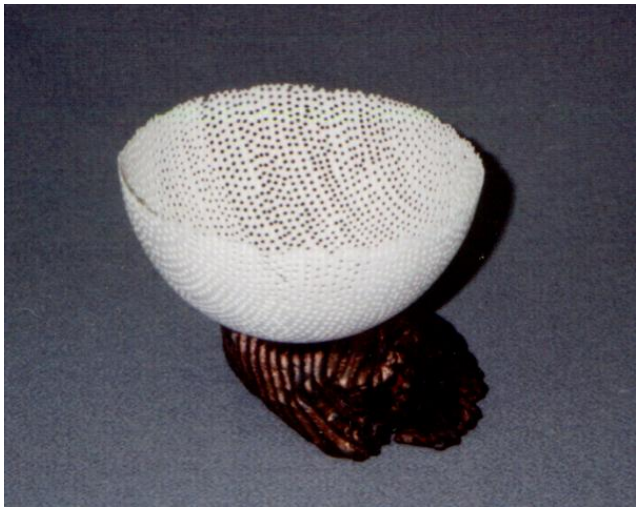


**Figure 24.** Juliet Armstrong. *Properties of Eggshell*, 1995. Bone China, paperclay and glaze. Collection: Private. http://www.julietarmstrong.co.za/_gallery.asp [accessed 15/05/2011].

Another reason for her use of paperclay was its ability to simulate bronze. At the time, Armstrong was combining her bone china forms with cast bronze bases (Figure 25). The financial cost of bronze is very high so to combat such overhead expenditure, she glazed the paperclay bases with manganese dioxide. Comparing Figure 25 with Figure 26, it is almost impossible to differentiate between the use of bronze with the glazed paperclay; the texture of the paperclay and its metallic glaze simulate the metal bronze (Figure 25).

**Figure 25.** Juliet Armstrong. *For Dick*, 1996. Bone China and bronze Collection: Private. http://www.julietarmstrong.co.za/_gallery.asp [accessed 15/05/2011].

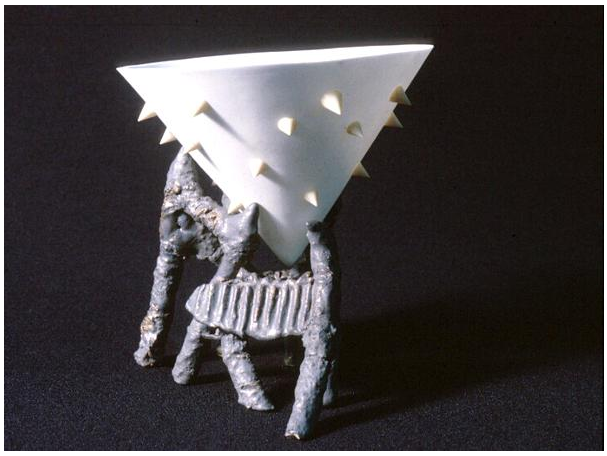


**Figure 26.** Juliet Armstrong. *Properties of Colesburg*, 1998. Bone China, bone and paperclay. Collection: Private. http://www.julietarmstrong.co.za/_gallery.asp [accessed 15/05/2011].

Armstrong considers the process of working with paperclay is essentially about experimenting with new methods and techniques. She feels that her experimentation with paperclay encourages students to test its working possibilities this in turn has pushed the lecturers further (Frisinger and Armstrong, 2010).

**Betsy Nield**

Betsy Nield is acknowledged in South African ceramic circles as the ex-Chairperson of the Western Cape Branch of Ceramics SA. She has sat as Vice chair of the National Executive of Ceramics SA: Administrator and teacher in the Ceramic Skills Development Programs: Chair of the Durban Ville Clay Museum and Vice Chair of the Durbanville Cultural Society. At the time of this dissertation Neild is the Co-Chairperson of the Western Cape branch of Ceramics SA (Frisinger and Nield, 2010) and (Marais, 2004: 17).

**Early ceramic history**

In an article for the *National Ceramics* by ceramist Ann Marais, Betsy Nield's professional achievements are recognized, but notes that, 'very little is known generally about Betsy Nield the potter, the serious ceramic artist' (Marais, 2004: 17). Born into an artistic family, her mother was a potter and encouraged Nield to be creative and enrolled her to private art classes at the age of 14 (Frisinger and Nield, 2010) and (Marais, 2004: 17). Despite being encouraged to pursue the arts Nield felt that at the time there was no university with a specialised ceramics department in the Western Cape, she therefore completed a degree in Business Commerce (Frisinger and Nield, 2010). Nield however did attend ceramics courses at the Stellenbosch Teachers' College whilst studying at university (Frisinger and Nield, 2010) and (Marais, 2004: 18). Nield considers herself a 'self-taught ceramist' (Frisinger and Nield, 2010). In 1983 Nield opened her own ceramic studio and pursued making domestic pots in the Anglo-Oriental genre 'as that was the fashion at the time' (Frisinger and Nield, 2010). Nield states that she has always been interested by the experimental nature of ceramics, continuously testing out different ceramic materials and methods (Frisinger and Nield, 2010).

**Paperclay**

After suffering from a neck injury in 1998, Nield is only allowed to lift 1kg per hand at a time (Frisinger and Nield, 2010). Unwilling to give up working with clay, Nield looked for alterative clay bodies that would be lighter yet still provide her with desirable material, aesthetic and conceptual effects. Paperclay therefore paperclay is the ideal material for Neild as

the cellulose fibres reduce the weight of the clay, without reducing workability. In fact, it has the opposite effect, increasing the workable nature of clay (Gault, 2005), (Hay, 2007), (Holmes, 2000), (Lightwood, 2000) and (Reijnders, 2005).

Nield first learnt about paperclay from international ceramic journals in 1997. Wishing to learn more about the subject, she ordered research documentation on paperclay from the Hertogenbosh Ceramic Institute and in 1999 attended the Millennium Ceramics Conference in Amsterdam (Frisinger and Nield, 2010).

In 2003 Nield, in her search to expand her ceramic knowledge, enrolled at the Cape Technikon to study an N4 Ceramic Diploma under the tutelage of Dr. Ralph Johnson. Nield states that the decision to formally study ceramics within an academic setting was done not to gain formal recognition, but rather as an opportunity to explore new creative territory (Frisinger and Nield, 2010).

Electing to work primarily in porcelain paperclay, Nield's early project was to produce a set of plates. Nield felt that her first plates (Figures 27 – 29) were too ridged and symmetrical so experimented with different firing methods to create 'wavy, more relaxed forms' (Marais, 2004:18). The plates were fired upside down on a mould, allowing the thin porcelain paperclay to naturally slump, forming wave-like contours (Frisinger and Nield, 2010).

**Figure 27.** Betsy Nield. *Plate (detail top view)*, 2003. Porcelain paperclay fired to cone 10. Collection: Private. http://www.ceramics-sa-cape.co.za/member_profile.php.profile_id=685 [accessed 10/04/2010].

**Figure 28.** Betsy Nield. *Plate (detail base; view)*, 2003.Porcelain paperclay fired to cone 10. Collection: private. http://www.ceramics-sa-cape.co.za/member_profile.php.profile_id=685 [accessed 10/04/2010].

**Figure 29.** Betsy Nield. *Plate with Leaves*, 2003. Porcelain paperclay fired to cone 10. Collection: Private. http://www.ceramics-sa-cape.co.za/member_profile.php.profile_id=685 [accessed 10/04/2010].

Porcelain paperclay leaves are placed inside the bowls (Figure 29). The leaves are made by painting paperclay slurry onto the veined side of wild guava leaves 'guava leaves are an ideal shape, size and texture for my work' (Frisinger and Nield, 2010). Once dry, the paperclay leaf can either be peeled away from the organic leaf, or alternatively, Nield will fire the organic leaf whilst still attached to organic leaf mould (Frisinger and Nield, 2010).

The concept of working with porcelain paperclay leaves eclipsed into Nield's subsequent paper porcelain box series (Figures 30 – 31 and 34). The design concept is based on a cardboard box, abandoned in a cupboard or attic, distorted from being manhandled and altered by

environmental factors such as heat (Frisinger and Nield, 2010). The organic slumping of the box is essential to both the physicality of Nield's forms and their conceptual meaning. The box acts as a physical container of objects that symbolises Nield's memories; 'her porcelain boxes are analogues to old boxes crammed full of a family's discarded objects, shoved into attics and cupboards' (Marais, 2004: 19). The porcelain leaves are metaphors for old keepsakes and memories. The idea is motivated by watching old leaves collected from the garden and disposed of into refuse containers. The fallen leaves themselves function as memories of a tree in full bloom (Marais, 2004: 19). Nield considers a trees valuable source of shade and vitality in nature. Even the final cycle of a leaf's existence as compost promotes renewal of life (Marais, 2004: 19).

**Figure 30.** Betsy Nield. *Box with paperclay leaves*, 2003. Paper porcelain fired in oxidation kiln 1300°C, dimensions unknown. Collection: Rusten Vrede, Durbanville Clay Museum. Image courtesy of Durbanville Clay Museum, 2010.

**Figure 31.** Betsy Nield. *Box with leaves*¸2002. Porcelain paperclay, 6,3 x 6,6 x 4,6cm. Collection: William Humphries Art Gallery, Kimberly. Photograph by Russell Scott, 2010.

With regard to the unglazed surface of her work, Nield states that the absence of glaze and colour is purely conceptual. The stark whiteness of the unglazed porcelain is to emphasise the neglected nature of old mementos and memories: old re-sized boxes packed away into dark cupboards and attics. No light is present; therefore no colour is seen (Frisinger and Nield, 2010). Nield has produced similar work that has been glazed illustrating an aesthetic consideration for colour (Figure 32). From a traditional utilitarian angle, glaze is used to make ceramic surface non-porous, therefore safe for food to be eaten off: 'Glaze provides decoration and colour, prevents penetration of liquids or acids, and yields a matt or glossy, easily cleaned, functional surface' (Peterson, 2000: 397). By applying glaze the box containers allude to functionalism.

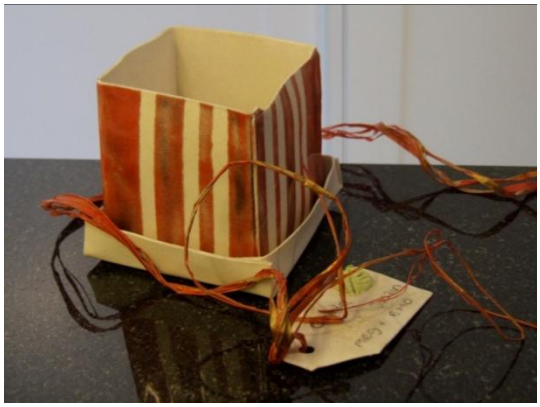


**Figure 32.** Betsy Nield. *Paper Porcelain box with glaze*, 2009. Porcelain paperclay, glaze, oxidation stoneware, dimensions unknown. Collection: Private. Photograph by Kim Bagley, 2010.

**Making process**

To make the box forms, Nield cuts a two dimensional template for a folded box from paper. Porcelain paperclay slurry is then spread directly onto the damp paper template. Working with scissors, Nield cuts the excess paperclay leaving a sharp edge. Left over paperclay is kept aside to be reconstituted at a later stage (Nield, 2004: 6). Nield works with a paper backing mould as a way of providing extra support to the literal paper thin slab of clay. The paper has the added benefit of preventing unappealing finger marks being imprinting into the soft clay, additionally the fibred texture of the paper surface is embossed onto the clay, resulting in an uncanny paper-like exterior (Frisinger and Nield, 2010) and (Nield, 2000: 6).

According to Nield, an important aspect of her working with paperclay is the exaggeration its materiality (Figure 33). The notion of a paper-like aesthetic is prevalent in Nield's paperclay works as she feels that 'you must be able to see that it is paperclay' (Frisinger and Nield, 2010).

**Figure 33.** Betsy Nield. *Untitled*, 2009. Porcelain paperclay, approx 6 x 15 cm. Collection: Private. Photograph by Kim Bagley, 2010.

The thin wall of the sculpture has the potential to fool to viewer to believe it was constructed from paper, not a ceramic material. The sharp liner construction combined with a soft, ephemeral-like warping of the projecting ledge and open tip add a sense of binarism to Nields work.

In the installation work titled *Memories* (Figure 34) again one can see that the organic reciprocity of paper is apparent. The intentional slumping and shifting of the porcelain paperclay in the kiln challenges the viewer's interpretation of the work. The power of this paper verse clay illusion is multiplied by the fact that the material being used is literally paper-thin.


**Figure 34.** Betsy Nield. *Memories*, 2003. Porcelain paperclay, 100 x 60cm. Collection: Corobrik Collection permanently housed at Pretoria Art Museum. Photograph curtsy of Ceramics South Africa, 2010.

**Lisa Firer**

Lisa Firer's ceramic work has gained popularity in the past few years. Her ceramic wares illustrate the pages of local and international interior decorating magazines, helping to increase her status as a South African ceramic artist. Firer has been working professionally as a ceramists for over a decade. Qualifying with a National Diploma in Ceramic Design from the Witwatersrand Technikon in 1995, she went on to work at Ardmore Ceramic Studio in 1996 as an Assistant Manager. Later the same year she started working at Barbara Jackson's Studio in Green Point, Cape Town. By January 1999, Firer opened her own ceramic studio in Cape Town. In 2000 she was invited to attend an artist in residence program in Denmark. Accompanying her with this residency was Sue Sellchope who introduced Firer to paperclay.

**Paperclay**

After her initial exposure to paperclay in Denmark, Firer continues to work with the medium. Firer describes her paperclay ceramics with the following key words: 'texture, layering, light, embellishment, translucency, fragility, beauty, diversity, colour, pattern and design' (www.lisafirer.co.za). Firer states that one of the motivating factors to work with porcelain paperclay being she is able to treat the clay in the same way one can with paper. She is able to cut, tear, emboss and print onto its surface. The ease of working with paperclay and its added

green strength, the material is able to be rolled out into a paper-thin sheet, is also a motivating aspect. The materiality of porcelain specifically is a major element of her studio works since 2000. Working with a material like porcelain paperclay Firer is able to achieve certain desirable qualities such as translucency, fragility and decorative surface:

> In my work, the use of this clay is a metaphor for human existence. Porcelain is at the same time, durable and resilient and yet also able to be smashed or cracked. There is something embodied in this material about the paradox of being a human being. The combination of incredible strength and resilience and at the same time, vulnerability and uncertainty. (www.lisafirer.co.za)

Firer makes her porcelain paperclay by combining powdered low fire CPS (Cape Pottery Supplies) Porcelain Super with pulped toilet paper and water. Firer works with toilet paper as there is no harmful dust which one would encounter working with industrial cellulose fibre. Another positive aspect of working with toilet paper is that it can be turned to pulp simply by adding hot water, saving time and energy when making the paperclay. To combat rotting, Firer adds domestic bleach to her paperclay.

**Making processes**

The porcelain paperclay slurry is first poured onto a plaster-of-Paris bat, once dry enough to be handled, the paperclay is removed from the bat. Paper-thin sheets are made by rolling the paperclay through a slab roller. Firer states that she is careful not to roll the paperclay sheets too thin. The increased green strength allows her to work the clay to such extremes that the forms will often not survive the kiln firing (Frisinger and Firer, 2010). Surface decoration can be added to the clay sheets by blind impressing the wet clay into bisque slab moulds (Figures 35 and 36).

**Figure 35.** Lisa Firer. *Bisque Clay Mould Embossed with Fynbos*, 2010. Bisque fired clay, approx: 20 x 40 cm. Collection: Private. Photograph by Kim Bagley, 2010.

**Figure 36.** Lisa Firer. *Fynbos vessels*, 2010. Porcelain paperclay, glazed inside. Collection: Private. Photograph by Kim Bagley, 2010.

The paperclay that is impressed into moulds to be embellished with various organic forms. The flexibility and malleability of wet paperclay captures great about of detail.

Firer wraps the embellished paperclay around cylindrical moulds to hold their form whilst drying. A stylistic mark of Firer is to slightly overlap at the joining points. A small blind embossed, postage stamp sized square of paperclay bearing the artists name is attached to all her work. Firer fires her work first to bisque. Her work is glazed, either on the inside only or the whole vessel. The second firing is to 1220°C (Frisinger and Firer, 2010).


**Figure 37.** Lisa Firer. *Truth*, 2007. Paper porcelain, 17 x 10.5 cm. Collection: William Humphries Art Gallery. Photograph by Russell Scott, 2010.

The high level of translucency of porcelain paperclay combined with the phrase *Truth* raises questions about the fragility of the implied term. This metaphor is exaggerated by the delicate nature of the thin walled vessel.

When I look at the above work by Firer (Figure 37), I observe the soft, gentle folded character of the paperclay. Her work is considerably thin and fragile, yet strong and elegant. Firer states:

> I use fragments of text from religious traditions, poetry and ancient wisdom. In the using and re-using of these textural references, I remind myself of this wisdom and beauty and share it with those who live with my work. (www.lisafirer.co.za)

Firer considers herself as committed to the tradition of creating hand-made craft objects. 'In this world of mass production I feel that the mark and energy of the maker are transferred into the work, especially with something as tactile as clay' (www.lisafirer.co.za). Her intention is to convey spiritual and emotional qualities such as light, beauty and gentleness into her studio works.

**Leanne Frisinger**

Inherently, both porcelain and paper encompass delicate fragility and ephemeral qualities. This can be reflected in the manipulations that I apply to the paperclay; from the softness of the fold or tear, to the sharpness of a cut. This idea is closely linked to the art of paper folding, Origami (this art form was at the basis of my clay constructions when I began my Master of Arts in Fine Art studies: Figures 3 and 4). The gestural and repetitive act of folding is a significant element in my paperclay studio work.

**Paper and translucency**

The high level of translucency apparent in Firer's thin paperclay works and the paper-like quality of Betsy Nield's box-like installations all serve as inspiration in my own work. I achieve optimum levels of translucency by working with very thin cast sheets of paperclay that contain up to 10% (dry weight) paper pulp. The combination of paper pulp with porcelain creates an optimum clay body that is flexible, strong and highly translucent when fired to temperatures exceeding 1220°C.

I work exclusively with a porcelain clay body for its translucency and range of ceramic colours which suit my chosen firing range. In Chapter Two I explained that paper-makers add kaolin (the main ingredient in porcelain) to paper as a filler and pigment. Like Nield, I take pleasure in making ceramics that intrigue the viewer in questioning the material's physical qualities and illusion/allusion to non-ceramic surfaces, forms and objects. 'Is it paper or is it clay?' Trompe l'oeil paper objects if you will. This concept is particularly evident in my two works, *Ephemera II* and *Transience* (Figures 38 and 40).

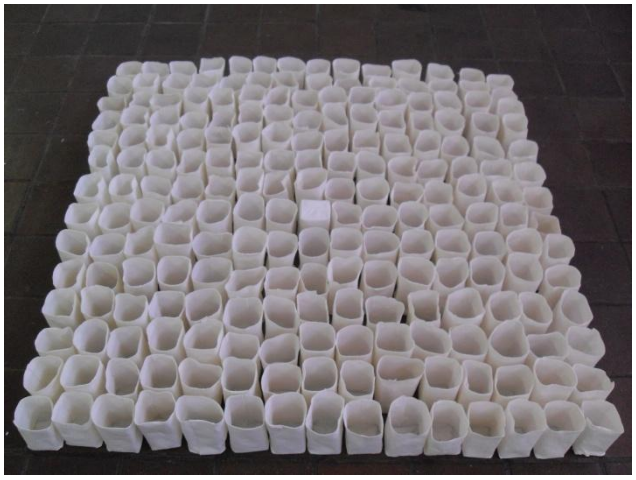


**Figure 38.** Leanne Frisinger. *Ephemera II*, 2009. Paper porcelain, 150 x 150 x 10cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

**Figure 39.** Leanne Frisinger. *Detail of Ephemera II*, 2009. Paper porcelain, 150 x 150 x 10cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

I decided to place the center box upside down to show the viewer softness of the folded base. The one closed vessel, surround by a sea of open forms creates an interesting polarity.

In *Ephemera II* I wished to focus on how paper can be folded around objects. In essence wet paperclay acts more like a synthetic fabric than paper or clay. The material has the ability to cut, tear, rip, crease, fold and join, allowing me to create a sculptural form from a flat, two dimensional sheet of paperclay. Working with simple folds, similar to the way one might wrap a gift with paper, I folded the porcelain paperclay around a cardboard box using it as an actual mould. Whilst each porcelain paperclay box is constructed from the same mould, the thin walls of the boxes encourage a slight element of distortion in the kiln, giving each box understated differences (Figure 40).

**Figure 40.** Leanne Frisinger. *Detail of Ephemera II*, 2009. Paper porcelain, 150 x 150 x 10cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

Note the essentially uniformity of the repeated shape. Only when viewed closely does one observe the subtle differences of each box.

The thin walls of each unit capitalise the translucent nature of porcelain. Filtered light and the shadow effect it creates existence independently beyond the material. This concept is best displayed by *Ephemera* (Figure 18), an early display of the same work. I want to 'draw-in' the viewer, inviting them to enjoy the simple mysterious silence of the work.

In *Transience* (Figure 41), I attempt to capture a feeling of the way sheets of paper creased, rumpled, bent and twisted as a gust of wind passes over them. I find that brief and short-lived movement of the paper to be beautiful in its simplicity.

**Figure 41.** Leanne Frisinger. *Transience*, 2011. Porcelain paperclay, metal pins and Perspex, 120 x 120 x 3cm. Collection: William Humphries Art Gallery. Photograph by Leanne Frisinger, 2011.

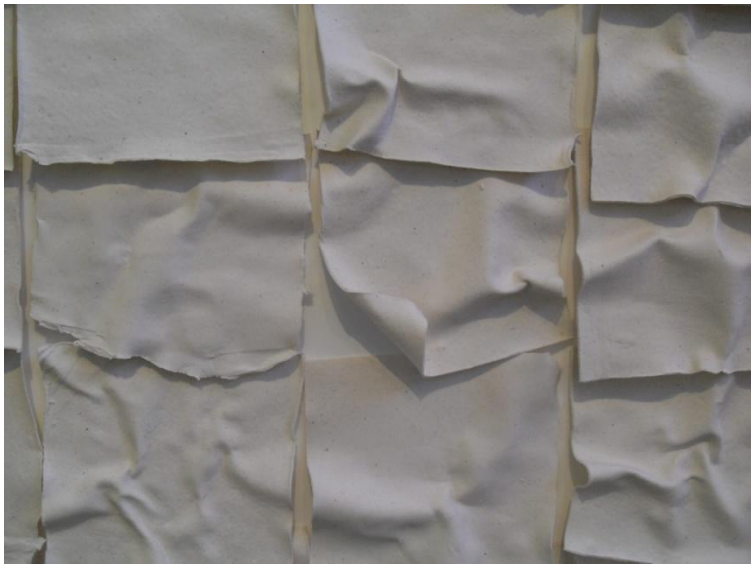


**Figure 42.** Leanne Frisinger. *Detail of Transience*, 2011. Porcelain paperclay, metal pins and Perspex, 120 x 120 x 3cm. Collection: William Humphries Art Gallery. Photograph by Leanne Frisinger, 2011.

**Colouring paperclay**

Wishing to expand the colour pallet of my ceramic work, I decided to experiment with the addition ceramic pigments to my porcelain paperclay slurry. The addition of paper in the clay does not significantly affect the colour of ceramic pigments (Connell, 2007: 89). The introduction of coloured pigments to my clay saw a departure from the aesthetic element of light and shadow, the thinness and unglazed surface quality of the fired paperclay still mimic qualities of paper (Figure 43).

**Figure 43.** Leanne Frisinger. *What a Lot I Got*, 2010. Porcelain paperclay, ceramic pigment. 11 x 70 x 35cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

The process of working with coloured paperclay is further adapted after Juliet Armstrong introduced me to the work of German ceramist Elke Sada. Armstrong attended a demonstration by Sada hosed at *Ceramic Arts London* exhibition, in February 2010. Working in a manner similar to the one demonstrated by Sada, I paint coloured paperclay slurry onto a plaster-of-Paris bat. Different coloured slurries are layered on top one another. Working with ceramic tools, I cut through the clay, adding castrating colours and linear patterns (Figure 44). Once the clay is firm to the touch, I lift clay sheet off the bat, revealing the decorated surface of the clay. This process requires one to treat the coloured slurry as if it were paint; the clay is the canvas.

**Figure 44.** Leanne Frisinger. *Vessel*, 2011. Porcelain paperclay, ceramic pigments, glaze on inside. 4 x 4 x 10 cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

**Paperclay and print**

The desire to explore printing onto a ceramic surface originated from my initial paperclay origami sculptures. Origami paper is often highly decorated with simple geometric shapes and patterns. Wanting to recreate the decorative nature of origami paper, I started researching different methods of ceramic printing. Scott states that, 'the advent of paperclay and a continuing interest in multimedia prints has led to a gradual exploration of the possibilities that ceramic materials have to offer' (Scott, 2002: 7). The connection between print-making and

my own ceramic work was fuelled primarily by the symbiotic relationship between paper and paperclay. Paperclay and paper share a material signature; ability to be worked from a flat sheet into three dimensional structures. I began exploring different ways to print onto my paperclay forms.

Whilst interviewing Firer at her Cape Town art studio, I was introduced to her decal decorated ceramic vessels (Figure 45 and 45). From an aesthetic stance, I enjoy the crisp, clear and high colour quality of Firer's decal printed vessels. For my own work, I wanted explore alternative ceramic printing methods that were less labour intensive than printing my own decals.

**Figure 45.** Lisa Firer. *Printed Vessel*, 2010. Porcelain paperclay, ceramic decal and glaze. Collection: Private. Photograph by Kim Bagley, 2010.

**Figure 46.** Lisa Firer. *Shwe Shwe vessel*, 2010. Porcelain paperclay, ceramic decal and glaze, approx 6 x 6cm. Collection: Private. Photograph by Kim Bagley, 2010.

Firer works in collaboration with Da Gama Textiles to reproduce their iconically South African *ishwe –shwe* motif as ceramic decals.


**Figure 47.** Lisa Firer. *Detail of base; Shwe Shwe vessel*. 2009. Collection: Private. Photograph by Kim Bagley, 2010.

I read about the artists Thomas Sipavicius, who is working with a direct photographic printing method known as gum dichromate. Chapter seven, *Direct photographic methods,* in Scott's book *Ceramic and Print* (2002) explains this old-fashioned printing method.

The process of I use to create a light-sensitive emulsions on ceramic surfaces is done by combining Gum Arabic (see glossary) with water, honey and potassium dichromate (see glossary). This is thinly applied to a glazed ceramic surface and allowed to dry in a dark room.

The coated ceramic surface is then exposed to ultraviolet light through a positive photo-stencil. The negative least exposed to ultraviolet light hardens, whilst the positive image is slightly sticky from the inclusion of the honey. The ceramic surface is then dusted with enamel powder pigment, adhering to where the emulsion is stickiest (Scott, 2002: 122). Scott states that the ceramic surface must then be washed in water for the image to be fully revealed (Scott, 2002: 121). However, I have never been able to achieve this result. Consequently, I simply fired the ceramic tile with the potassium dichromate coating.

**Figure 48.** Leanne Frisinger. *Gum Dichromate test tile*, 2009. Glazed terracotta tile, fired potassium dichromate based emulation and enamel, 15 x 15cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

The potassium dichromate emulsion gives the ceramic surface a green-hued background when fired.

I found this process to be technically challenging and produced complex visual results. However potassium dichromate is highly carcinogenic and toxic. As I work in a shared studio space, I felt that it was best to discontinue working with such a hazardous material.

Hence, I began to research other ways in which to print onto a ceramic surface. As previously stated in Chapter Three, I came across a method using photocopied images to make lithography transfers that can be printed onto my paperclay in *Ceramics and Print* (Scott, 2002: 112 - 113) and *Surface Design for Ceramics* (Mills, 2008: 78 – 82). Lithography is a chemical printing process that relies on the scientific fact that water repels oil. After attempting a number of different methods, I was able to develop a process for successful transfer printing onto an unfired paperclay surface (see Chapter Three, sub-section, B. Photo lithography printing onto a paperclay surface).

Working with old family photographs I am able to preserve images on a clay surface. Paper is an organic material and will eventually decay whilst ceramics will not rot or fade way. For the work *Young Adele Series* (Figure 49 and 50), I have worked once again with the undemanding box motif, printing photographs from my mother's childhood onto the coloured clay surface.

**Figure 49.** Leanne Frisinger. *Young Adele Series*, 2010. Porcelain paperclay, ceramic pigments and photo lithography, approx 30 x 5 x 5cm. Collection: Private. Photograph by Alan Spence, 2011.

**Figure 50.** Leanne Frisinger. *Detail; Young Adele Series*, 2010. Porcelain paperclay, ceramic pigment and photo lithography, approx 30 x 5 x 5cm. Collection: Private. Photograph by Alan Spence, 2011.

In the work *Right in Two/ War poem* (Figure 51), all of the photographs are of different family members portraying their various enrolments with the armed forces, dating from World War II to current conflict in Afghanistan. Being from such a strong military background I wish to emphasise the human element attached to modern warfare and how the decision to join the armed forces affects a family, whilst articulating my critical stance on war.

This work offers a tangible visual experience that touches on deeply buried emotions. By

placing the folding box forms on the wall like two dimensional photographs, the work exceeds the illusion of printed paper.

**Figure 51.** Leanne Frisinger. *Right in Two/War Poem*, 2010. Porcelain paperclay, ceramic pigment and photo lithography, 100 x 90 x 5cm. Collection: Private. Photograph by Leanne Frisinger, 2011.

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The blocks are all constructed via the method of folding the porcelain paperclay over cardboard moulds. The sides of the blocks all have fold creases, adding to the misapprehension of their true material; clay verse paper.

In the series of work titled *Tea Canisters*, each tea canister has been made for a person in my life. The simple tea canister acts as an everyday shrine. By incorporating photographs, text and images with the work, I have been able to personalise each vessel in forms and images about my personal life, family history and memories (Figure 54).

**Figure 53.** Leanne Frisinger. *Tea Canister Series*, 2010 - 2011. Porcelain paperclay, ceramic pigment, photo lithography and glaze on inside, dimensions varied. Collection: Private. Photograph by Leanne Frisinger, 2011.

**Figure 54.** Leanne Frisinger. *Learning to Fly.* Porcelain paperclay, ceramic pigment, photo lithography and glaze on inside, approx: 20 cm x 12cm x 6cm. Collection: Private. Photograph by Alan Spence, 2011.

The aeroplane image I use for the lithography transfer is from photograph of my father flying at his Rhodesian Air Force 'Wings' graduation in 1973. The image of the aeroplane is a recurring theme in my work as I am from a family of aviators.

## Conclusion

The aim of my dissertation was to identify some key technical, practical and conceptual aspects of recent paperclay ceramics in South Africa. I set out to document my making processes and materials, in the light of the current practices and studio works of local ceramists Juliet Armstrong, Betsy Nield and Lisa Firer.

Before the main documenting chapters of this dissertation I have contextualised my studies in terms of practice-led methodologies. I established the validity of my role as a practitioner-researcher, liking the ceramic studio to a scientific laboratory, conducting and documenting my experiments with paper and clay. I also reviewed key texts in conveying the histories and aesthetic influences of paperclay as a creative 'new' material in ceramics.

Chapter Two identified significant historical surveys and contemporary productions of paperclay. I alluded to paperclay being a postmodern material that rejects the modernist view of clay as a natural, earth material. The contemporary paperclay vessel/object was discussed to draw attention to theme of continuity and change in studio works.

Chapter Three looks at the physical properties and creative process of combination of clay and cellulose fibre. The real strength of paperclay is its versatility and adaptability, transcending chronological and cultural boundaries. Its appeal is universal. The documentation of my processes, materials and techniques was included in this chapter with a view to provide future researchers in this field valid practical information gained from my original discoveries.

Chapter Four applied technical, practical and some iconographic considerations from previous chapters to the examples of paperclay work of four linking South African ceramists Juliet Armstrong, Betsy Nield and Lisa Firer and Leanne Frisinger. I found their work to be primarily concerned with the materiality of paper and clay.

The studio pottery movement is founded on the idea of reconnecting with the earth and a natural order. Paperclay is a synthetic material that rejects the studio pottery ideology of clay

as a natural, earth mineral thus liking it as a postmodern material. Paperclay is not only a creative material in its own right, but a tool that can be used to bring ideas into a physical reality that is not possible with non-cellulose clays.

In conclusion I deduced that by adding paper to clay it changes the manner in which clay normally acts. Therefore I feel that the title ‘paperclay’ does not adequately describe the material. It is not clay or paper, rather an exotic hybrid synthetic material. It is this synthetic-like nature that makes paperclay manipulation a far more direct and innovative means to create objects and visual works of art.

## Glossary

| | |
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| *Adobe* | A brick or building material of sun-dried earth and straw. (Rhodes, 1973: 53) |
| *Beating or refining* | The mechanical treatment of the fibres in the water to increase surface area, flexibility and promote bonding when dried. (www.paperonweb.com) |
| *Bentonite* | Highly plastic clay originating in the decomposition of volcanic ash. It is extremely fine and can be dispersed widely through bodies and glazes, in which it is used to impart plasticity. (Hamer, 1986: 23) |
| *Bisque, biscuit* | Unglazed but fired ware, usually accomplished in a low temperature firing prior to the glaze fire: also applies to unglazed fired high, as in porcelain bisque. (Peterson, 2000: 395) |
| *Blind embossing* | A design raised from paper without ink applied. (Sloman, 2009: 196) |
| *Body* | A clay for a special purpose. It is created by blending different clays or by adding to clays other minerals in order to produce a desired workability or finished result. A body is the result of man's technology. A clay is the natural product, though possibly simply processed to make it homogeneous. (Hamer, 1986: 30) |
| *Bone China* | Porcelain of high translucency made with bone ash. (Peterson, 2000: 395) |
| *Cellulose fibre* | The primary natural ingredient found in most paper and as a clay body additive, it has distinct characteristics. (Gault, 2005: 25) |

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| *Ceramics* | Keramics. Clay products made permanent by heat (the ceramic change); also the study of this subject. (Hamer, 1986: 53) |
| *Ceramist* | Originally a technician, now used for a ceramic artist or potter. (Hamer, 1986: 53) |
| *China Clay* | See Kaolin. |
| *Coating* | The process of coating a paper in order to enhance potential print quality. China Clay (see kaolin) coating uses a white clay. (Sloman, 2009: 197) |
| *Cones* | Pyrometric cones. Placed in the kiln during firing as a guide, and to indicate the final heat. (Peterson, 2000: 396) |
| *Cotton fiber* | The white material found on cotton plants, the short fibres of which can be used in paper pulps. (Sloman, 2009: 197) |
| *Decal* | Ceramic pigments photo-screened or patterned on to flexible decal paper for transfer to bisque or over-glaze. |
| *Deckle* | The frame traditionally used to hold pulp in place on a mould as water is drained off. (Sloman, 2009: 197) |
| *Deflocculants* | Added to casting slip to regulate viscosity and thixotropy. Sodium silicate (water-glass) in combination with sodium carbonate (sodium ash) are commonly used. (Reijnders, 2005: 36) |
| *Dry strength* | The ability of a completely dried piece to withstand pressure or shock. A piece with a high dry strength is able to withstand more stress during handling. Highly plastic clay bodies tend to have a good dry strength. An optimal packing density but especially an addition of cellulose fibres will increase dry strength. (Reijnders, 2005: 28) |

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| *Earthenware* | All ware with a permeable or porous body after firing; by definition earthenware has 10 to 15 percent adsorption. (Peterson, 396) |
| *Engobe* | A liquid clay slip coloured with metallic earth oxides or glaze stains applied to wet or leather-hard ware for decoration; also natural clays of different colours applied on raw ware for decoration. Engobe can be covered by glaze or used alone. |
| *Fabriano paper* | A brand name for 100% cotton, acid free paper that is surface sized with two natural deckle edges, and the watermark "C.M. FABRIANO - 100/100 COTTON" along both edges. (Source: http://www.handprint.com/HP/WCL/paper2b.html) |
| *Feldspar* | Mineral found in granite which melts around 1260°C, used as a flux in clay bodies and glaze. When feldspar rock loses its alkaline content through decomposition, it becomes kaolin and is thus the origin of clay. (Peterson, 2000: 397) |
| *Filler (paper)* | Substance (normally kaolin) added to paper pulps to fill in gaps in the fiber and make surface less see-through. (Sloman, 2009: 197) |
| *Fillers (clay)* | A mineral added to a clay body to control plasticity, increase working strength, create more open structure and reduce shrinkage. (Reijnders, 2005: 36) |
| *Formulation* | The distribution of fibres in a sheet of paper. (Sloman, 2009: 197) |
| *Glaze* | Glassy melted coating developed by chemicals and heat on a clay or metal surface; technically, an impervious silicate coating formed by the fusion of inorganic materials. Glaze has a similar oxide composition to glass, but also includes a binder. Glaze provides decoration and colour, prevents penetration of liquids or acids, and yields a matt or glossy, |

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| | easily cleaned, functional surface. (Peterson, 2000: 397) |
| *Grog* | Crushed or ground-up fired clay, purchased commercially or made by the potters; used to reduce shrinkage, yield texture, give fired clay resistance to temperature change, help in even drying and firing, and help large pieces to stand up during construction. More than 30 percent grog addition may cause too much porosity and reduced fired strength. (Peterson, 2000: 397) |
| *Gum Arabic* | A natural tree gum. (Peterson, 2000: 397) |
| *Kaolin* | Synonymous with China clay. The purest clay, approximating closely the idealized clay mineral kaolinite. Contains very little iron impurity and is therefore white. It is an essential ingredient in making porcelain body and bone chine body. (Hamer, 1986: 54, 183) |
| *Kiln* | Furnace for fired clay, slumping glass, or melting enamels; studio kilns can achieve temperatures up to 1371°C, depending on their construction materials; they can be fueled carbonaceously, organically, or electrically. (Peterson, 2000: 398) |
| *Leather-hard* | Cheese hard stage which clay reaches before being bone-dry; stiff enough to support itself, but can still be altered. (Peterson, 2000: 398) |
| *Loading* | The process of adding minerals to paper pulp, such a China clay, to add bulk, alter opacity, or enhance colour (Sloman, 2009: 198) |
| *Mold* | Usually a plaster form in clay, plasticine, plaster or found object (Peterson, 2000: 398) |
| *Molochite* | A specific type of grog: it is made out of Kaolin and fired at very high temperature. It has white colour and reduces firing and cooling tension |

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| | due to low expansion rate (Reijnders, 2005: 37) |
| *Mould (ceramic)* | Usually a plaster form, single or multi-pieced, which will be used to reproduce any number of copies of the original model in clay or plaster (Peterson, 2000: 398) |
| *Mould (paper)* | The wooden frame with laid or woven surface for hand-making paper (Sloman, 2009: 199) |
| *Origami* | The traditional Japanese art of paper folding (Sloman, 2009: 199) |
| *Paper fibres* | Paper is made out of different kinds of cellulose fibres. Paper fibres can be used in all types of clay bodies including a casting slip. To obtain cellulose fibres different kinds of paper can be used. Good results have been gained using toilet paper: it is easy to process and it does not contain (much) glue (Reijnders, 2005: 39) |
| *Paper porcelain* | Porcelain slip mixed together with paper pulp and cast and rolled into sheets (Lane, 1995: 217) |
| *Paperclay* | A half solid, half fluid plastic modeling mix of clay, paper pulp and water. Paperclay handles both like and unlike the clay and paper it is made of (Gault, 2005: 7) |
| *Plaster-of-Paris* | The mineral gypsum, with the chemical composition of calcium sulfate, used for clay reproduction and as a work surface (Peterson, 2000: 399) |
| *Plasticity* | The essential property that allows clay to be shaped and reformed (Lane, 1995: 217) |
| *Porcelain* | Mechanically strong, hard, frequently translucent, fired clay body with zero absorption. Porcelain is dense and vitreous, the strongest of all clay bodies unless very thin (Peterson, 2000: 399) |

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| *Porcelain Super* | A brand name for commercially bought porcelain. |
| *Potassium dichromate* | (Bichromate). A Soluble crystalline material with a bright red-orange colour. Care should be taken with potassium dichromate because it is soluble and poisonous (Hamer, 1986: 251) |
| *Pottery* | A loosely-used term; often means earthenware or just any clay piece that has been fired (Peterson, 2000: 399) |
| *Pulp* | The main ingredient in the papermaking process, consisting of a variety of ingredients including cotton, rag and wood (Sloman, 2009: 199) |
| *Saggar* | (1) Refractory container or fire-clay box in which pottery is stacked during firing or protection from direct flame.<br>(2) A container for holding fuming materials such as metal oxides, chemical salts, and organic substances, that will act on the ware in the saggar during the fire (Peterson, 2000: 400) |
| *Shrinkage* | Contraction of clays or bodies in drying and firing, caused by the loss of physical and chemical water and the achieving of molecular density (Peterson, 2000: 400) |
| *Silica* | Oxide of silicon, found abundantly in nature as quartz, sand, and flint; the essential oxide in ceramics (Peterson, 2000: 400) |
| *Slab* | Flat piece of clay from which shapes can be fabricated. (Peterson, 2000: 400) |
| *Slab building* | Forming a shape from sheets of clay (Hamer, 1986: 293) |
| *Slip* | A suspension of ceramic materials in water, generally refers to casting slip for molds; can mean a liquid clay engobe for decorating or glaze slip (Peterson, 2000: 400) |

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| *Slurry* | Thick suspension of one or more ceramic materials in water (Peterson, 200: 400) |
| *Stains* | To expand the colour range, ceramic stains cab be added to a clay body (Rijnders, 2005: 39) |
| *Stoneware* | Hard, dense, and durable ware generally fired to 1200°C and above; a body with o to 5 percent absorption, regardless of firing temperature (Peterson, 2000: 401) |
| *Translucency* | Ability to transmit scattered light, not quite transparent. (Peterson, 2000: 401) |
| *Trompe l'oeil* | 'Deceptive' portrayal of an object; making something unreal look as real as possible. (Peterson, 2000: 401) |

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# Appendix 1

**Leanne Frisinger's Porcelain paperclay recipe**

This recipe is a variation of Hilda Ditchburn's porcelain recipe. The original recipe does not include the addition of molochite or paper (*CVA Ceramics Handbook*).

Super Standard Kaloin: 55%

Blesberg Feldspar: 25%

Silica: 15%

Bentonine: 5%

Molochite: 5%

Tissue/toilet paper (dry weight) 5-10%

# Appendix 2

**Artists Questionnaire**

1. How long have you been working with clay?
2. Do you work as potter professionally?
3. Do you have any formal ceramic training? If so, when and where did you study and who where your mentors?
4. When were you first introduced to working with paperclay? Who introduced you to the technique?
5. Do you use that same method that you where initially shown or have you created your own methods?
6. What has been the motivating factor for you to use paperclay to create your ceramic works and how has it stylistically influenced your work?
7. What are the technical advantages of working with paperclay as opposed to a regular clay body?
8. Have you encountered any major disadvantages of working with paperclay? If so how have you overcome such obstacles?
9. Do you make your own paperclay body? If yes, please explain the processes. If no where are you purchasing your paperclay?
10. What clay body do you primarily use to create paperclay? What has influenced your material preference?
11. Do you glaze your paperclay work? Is this choice to glaze or un-glaze an aesthetic consideration?
12. What temperatures do you fire paperclay works to?
13. How has your paperclay work been received within the South African ceramic community?
14. Who are your major artistic influences?
15. Do you have any paperclay work in any galleries or art museums?

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